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Appendix F

Pre-RI Sample Analytical Reports

PHASE I RI DATA PACKAGES

Report of Analysis

AECOM

4016 Salt Pointe Parkway
North Charleston, SC 29405
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **60328308**

Lot Number: **QH27050**

Date Completed: **09/03/2015**



Nisreen Saikaly
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: QH27050

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: QH27050

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-2I	Aqueous	08/26/2015 1235	08/27/2015
002	MW-9I	Aqueous	08/26/2015 1415	08/27/2015
003	MW-6I	Aqueous	08/26/2015 1540	08/27/2015
004	MW-5I	Aqueous	08/27/2015 1440	08/27/2015
005	MW-7I	Aqueous	08/27/2015 1550	08/27/2015
006	TRIP BLANK	Aqueous	08/26/2015	08/27/2015

(6 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: QH27050

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-2I	Aqueous	Chloroform	8260B	0.75	BJ	ug/L	5
001	MW-2I	Aqueous	Trichloroethene	8260B	17		ug/L	6
002	MW-9I	Aqueous	Chloroform	8260B	24	J	ug/L	7
002	MW-9I	Aqueous	cis-1,2-Dichloroethene	8260B	21	J	ug/L	7
002	MW-9I	Aqueous	Tetrachloroethene	8260B	1.7	J	ug/L	7
002	MW-9I	Aqueous	Trichloroethene	8260B	380		ug/L	8
003	MW-6I	Aqueous	Chloroform	8260B	0.89	BJ	ug/L	9
003	MW-6I	Aqueous	cis-1,2-Dichloroethene	8260B	2.6	J	ug/L	9
003	MW-6I	Aqueous	Tetrachloroethene	8260B	0.29	J	ug/L	9
003	MW-6I	Aqueous	Trichloroethene	8260B	20		ug/L	10
004	MW-5I	Aqueous	Acetone	8260B	2.1	J	ug/L	11
004	MW-5I	Aqueous	Chloroform	8260B	2.9	J	ug/L	11
004	MW-5I	Aqueous	1,2-Dichloroethane	8260B	1.1	J	ug/L	11
004	MW-5I	Aqueous	cis-1,2-Dichloroethene	8260B	0.92	J	ug/L	11
004	MW-5I	Aqueous	Trichloroethene	8260B	430		ug/L	12
005	MW-7I	Aqueous	Chloroform	8260B	1.6	J	ug/L	13
005	MW-7I	Aqueous	1,1-Dichloroethane	8260B	1.7	J	ug/L	13
005	MW-7I	Aqueous	1,1-Dichloroethene	8260B	3.8	J	ug/L	13
005	MW-7I	Aqueous	cis-1,2-Dichloroethene	8260B	61		ug/L	13
005	MW-7I	Aqueous	Tetrachloroethene	8260B	1.3	J	ug/L	13
005	MW-7I	Aqueous	Trichloroethene	8260B	290		ug/L	14

(21 detections)

Volatile Organic Compounds by GC/MS

 Client: **AECOM**

 Laboratory ID: **QH27050-001**

 Description: **MW-2I**

 Matrix: **Aqueous**

 Date Sampled: **08/26/2015 1235**

 Date Received: **08/27/2015**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	1	09/03/2015 0218	JJG		84037

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	2
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	2
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	2
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	2
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	2
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	2
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	2
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	2
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	2
Chloroform	67-66-3	8260B	0.75	BJ	5.0	0.21	ug/L	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	2
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	2
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	2
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	2
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	2
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	2
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	2
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	2
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	2
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	2
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	2
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	2
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	2
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	2
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	2
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	2
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	2

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH27050-001
Description: MW-2I	Matrix: Aqueous
Date Sampled: 08/26/2015 1235	
Date Received: 08/27/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	1	09/03/2015 0218	JJG		84037

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	17		5.0	0.16	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	2
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	2
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		95	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
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Volatile Organic Compounds by GC/MS

 Client: **AECOM**

 Laboratory ID: **QH27050-002**

 Description: **MW-9I**

 Matrix: **Aqueous**

 Date Sampled: **08/26/2015 1415**

 Date Received: **08/27/2015**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	5	09/02/2015 1522	ALL		83958

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		100	8.1	ug/L	2
Benzene	71-43-2	8260B	ND		25	1.1	ug/L	2
Bromodichloromethane	75-27-4	8260B	ND		25	1.2	ug/L	2
Bromoform	75-25-2	8260B	ND		25	1.8	ug/L	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	0.95	ug/L	2
2-Butanone (MEK)	78-93-3	8260B	ND		50	9.1	ug/L	2
Carbon disulfide	75-15-0	8260B	ND		25	2.3	ug/L	2
Carbon tetrachloride	56-23-5	8260B	ND		25	1.6	ug/L	2
Chlorobenzene	108-90-7	8260B	ND		25	1.0	ug/L	2
Chloroethane	75-00-3	8260B	ND		25	1.4	ug/L	2
Chloroform	67-66-3	8260B	24	J	25	1.1	ug/L	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	0.95	ug/L	2
Cyclohexane	110-82-7	8260B	ND		25	1.5	ug/L	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.8	ug/L	2
Dibromochloromethane	124-48-1	8260B	ND		25	1.2	ug/L	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	0.85	ug/L	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.3	ug/L	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	0.95	ug/L	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	0.95	ug/L	2
Dichlorodifluoromethane	75-71-8	8260B	ND		25	4.3	ug/L	2
1,1-Dichloroethane	75-34-3	8260B	ND		25	0.95	ug/L	2
1,2-Dichloroethane	107-06-2	8260B	ND		25	1.2	ug/L	2
1,1-Dichloroethene	75-35-4	8260B	ND		25	1.6	ug/L	2
cis-1,2-Dichloroethene	156-59-2	8260B	21	J	25	1.0	ug/L	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		25	1.7	ug/L	2
1,2-Dichloropropane	78-87-5	8260B	ND		25	1.5	ug/L	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	1.5	ug/L	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	1.1	ug/L	2
Ethylbenzene	100-41-4	8260B	ND		25	1.1	ug/L	2
2-Hexanone	591-78-6	8260B	ND		50	1.3	ug/L	2
Isopropylbenzene	98-82-8	8260B	ND		25	0.70	ug/L	2
Methyl acetate	79-20-9	8260B	ND		25	1.2	ug/L	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	1.2	ug/L	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	1.5	ug/L	2
Methylcyclohexane	108-87-2	8260B	ND		25	0.80	ug/L	2
Methylene chloride	75-09-2	8260B	ND		25	2.1	ug/L	2
Styrene	100-42-5	8260B	ND		25	0.65	ug/L	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	0.65	ug/L	2
Tetrachloroethene	127-18-4	8260B	1.7	J	25	1.1	ug/L	2
Toluene	108-88-3	8260B	ND		25	1.2	ug/L	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	1.5	ug/L	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	0.65	ug/L	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	1.2	ug/L	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	1.1	ug/L	2

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH27050-002
Description: MW-9I	Matrix: Aqueous
Date Sampled: 08/26/2015 1415	
Date Received: 08/27/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	5	09/02/2015 1522	ALL		83958

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	380		25	0.80	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		25	3.7	ug/L	2
Vinyl chloride	75-01-4	8260B	ND		10	2.5	ug/L	2
Xylenes (total)	1330-20-7	8260B	ND		25	1.6	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		87	70-130
Toluene-d8		93	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH27050-003
Description: MW-6I	Matrix: Aqueous
Date Sampled: 08/26/2015 1540	
Date Received: 08/27/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	1	09/03/2015 0240	JJG		84037

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	2
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	2
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	2
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	2
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	2
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	2
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	2
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	2
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	2
Chloroform	67-66-3	8260B	0.89	BJ	5.0	0.21	ug/L	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	2
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	2
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	2
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	2
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	2
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	2
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	2
cis-1,2-Dichloroethene	156-59-2	8260B	2.6	J	5.0	0.20	ug/L	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	2
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	2
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	2
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	2
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	2
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	2
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	2
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	2
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	2
Tetrachloroethene	127-18-4	8260B	0.29	J	5.0	0.22	ug/L	2
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	2

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH27050-003
Description: MW-6I	Matrix: Aqueous
Date Sampled: 08/26/2015 1540	
Date Received: 08/27/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	1	09/03/2015 0240	JJG		84037

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	20		5.0	0.16	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	2
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	2
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		93	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH27050-004
Description: MW-5I	Matrix: Aqueous
Date Sampled: 08/27/2015 1440	
Date Received: 08/27/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/01/2015 1309	SES		83869
2	5030B	8260B	5	09/02/2015 1544	ALL		83958

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	2.1	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	2.9	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	1.1	J	5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	0.92	J	5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH27050-004
Description: MW-5I	Matrix: Aqueous
Date Sampled: 08/27/2015 1440	
Date Received: 08/27/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/01/2015 1309	SES		83869
2	5030B	8260B	5	09/02/2015 1544	ALL		83958

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1
Trichloroethene	79-01-6	8260B	430		25	0.80	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		110	70-130		95	70-130
Bromofluorobenzene		105	70-130		87	70-130
Toluene-d8		106	70-130		92	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

 Client: **AECOM**

 Laboratory ID: **QH27050-005**

 Description: **MW-71**

 Matrix: **Aqueous**

 Date Sampled: **08/27/2015 1550**

 Date Received: **08/27/2015**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	09/01/2015 1828	SES		83869

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		100	8.1	ug/L	1
Benzene	71-43-2	8260B	ND		25	1.1	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		25	1.2	ug/L	1
Bromoform	75-25-2	8260B	ND		25	1.8	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	0.95	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	9.1	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		25	2.3	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		25	1.6	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		25	1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		25	1.4	ug/L	1
Chloroform	67-66-3	8260B	1.6	J	25	1.1	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	0.95	ug/L	1
Cyclohexane	110-82-7	8260B	ND		25	1.5	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.8	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		25	1.2	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	0.85	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.3	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	0.95	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	0.95	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		25	4.3	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	1.7	J	25	0.95	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		25	1.2	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	3.8	J	25	1.6	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	61		25	1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		25	1.7	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		25	1.5	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	1.5	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	1.1	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		25	1.1	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	1.3	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		25	0.70	ug/L	1
Methyl acetate	79-20-9	8260B	ND		25	1.2	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	1.2	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	1.5	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	0.80	ug/L	1
Methylene chloride	75-09-2	8260B	ND		25	2.1	ug/L	1
Styrene	100-42-5	8260B	ND		25	0.65	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	0.65	ug/L	1
Tetrachloroethene	127-18-4	8260B	1.3	J	25	1.1	ug/L	1
Toluene	108-88-3	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	1.5	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	0.65	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	1.1	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH27050-005
Description: MW-71	Matrix: Aqueous
Date Sampled: 08/27/2015 1550	
Date Received: 08/27/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	09/01/2015 1828	SES		83869

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	290		25	0.80	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		25	3.7	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		10	2.5	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	1.6	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		120	70-130
Bromofluorobenzene		96	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH27050-006
Description: TRIP BLANK	Matrix: Aqueous
Date Sampled: 08/26/2015	
Date Received: 08/27/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/01/2015 1106	SES		83869

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH27050-006
Description: TRIP BLANK	Matrix: Aqueous
Date Sampled: 08/26/2015	
Date Received: 08/27/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/01/2015 1106	SES		83869

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		106	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		109	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ83869-001

Matrix: Aqueous

Batch: 83869

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	09/01/2015 1026
Benzene	ND		1	5.0	0.21	ug/L	09/01/2015 1026
Bromodichloromethane	ND		1	5.0	0.23	ug/L	09/01/2015 1026
Bromoform	ND		1	5.0	0.35	ug/L	09/01/2015 1026
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	09/01/2015 1026
2-Butanone (MEK)	ND		1	10	1.8	ug/L	09/01/2015 1026
Carbon disulfide	ND		1	5.0	0.45	ug/L	09/01/2015 1026
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	09/01/2015 1026
Chlorobenzene	ND		1	5.0	0.20	ug/L	09/01/2015 1026
Chloroethane	ND		1	5.0	0.28	ug/L	09/01/2015 1026
Chloroform	ND		1	5.0	0.21	ug/L	09/01/2015 1026
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	09/01/2015 1026
Cyclohexane	ND		1	5.0	0.30	ug/L	09/01/2015 1026
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	09/01/2015 1026
Dibromochloromethane	ND		1	5.0	0.23	ug/L	09/01/2015 1026
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	09/01/2015 1026
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	09/01/2015 1026
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	09/01/2015 1026
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	09/01/2015 1026
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	09/01/2015 1026
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	09/01/2015 1026
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	09/01/2015 1026
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	09/01/2015 1026
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	09/01/2015 1026
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	09/01/2015 1026
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	09/01/2015 1026
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	09/01/2015 1026
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	09/01/2015 1026
Ethylbenzene	ND		1	5.0	0.21	ug/L	09/01/2015 1026
2-Hexanone	ND		1	10	0.26	ug/L	09/01/2015 1026
Isopropylbenzene	ND		1	5.0	0.14	ug/L	09/01/2015 1026
Methyl acetate	ND		1	5.0	0.24	ug/L	09/01/2015 1026
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	09/01/2015 1026
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	09/01/2015 1026
Methylcyclohexane	ND		1	5.0	0.16	ug/L	09/01/2015 1026
Methylene chloride	ND		1	5.0	0.42	ug/L	09/01/2015 1026
Styrene	ND		1	5.0	0.13	ug/L	09/01/2015 1026
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	09/01/2015 1026
Tetrachloroethene	ND		1	5.0	0.22	ug/L	09/01/2015 1026
Toluene	ND		1	5.0	0.24	ug/L	09/01/2015 1026
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	09/01/2015 1026
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	09/01/2015 1026
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	09/01/2015 1026
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	09/01/2015 1026

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ83869-001

Matrix: Aqueous

Batch: 83869

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	09/01/2015 1026
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	09/01/2015 1026
Vinyl chloride	ND		1	2.0	0.50	ug/L	09/01/2015 1026
Xylenes (total)	ND		1	5.0	0.32	ug/L	09/01/2015 1026
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		78	70-130				
1,2-Dichloroethane-d4		74	70-130				
Toluene-d8		75	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ83869-002

Matrix: Aqueous

Batch: 83869

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	104	60-140	09/01/2015 0922
Benzene	50	52		1	105	70-130	09/01/2015 0922
Bromodichloromethane	50	54		1	107	70-130	09/01/2015 0922
Bromoform	50	54		1	108	70-130	09/01/2015 0922
Bromomethane (Methyl bromide)	50	53		1	105	60-140	09/01/2015 0922
2-Butanone (MEK)	100	120		1	117	60-140	09/01/2015 0922
Carbon disulfide	50	54		1	109	60-140	09/01/2015 0922
Carbon tetrachloride	50	58		1	116	70-130	09/01/2015 0922
Chlorobenzene	50	51		1	102	70-130	09/01/2015 0922
Chloroethane	50	52		1	105	60-140	09/01/2015 0922
Chloroform	50	52		1	104	70-130	09/01/2015 0922
Chloromethane (Methyl chloride)	50	55		1	110	60-140	09/01/2015 0922
Cyclohexane	50	54		1	107	70-130	09/01/2015 0922
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	94	70-130	09/01/2015 0922
Dibromochloromethane	50	54		1	108	70-130	09/01/2015 0922
1,2-Dibromoethane (EDB)	50	51		1	102	70-130	09/01/2015 0922
1,3-Dichlorobenzene	50	51		1	102	70-130	09/01/2015 0922
1,2-Dichlorobenzene	50	51		1	101	70-130	09/01/2015 0922
1,4-Dichlorobenzene	50	50		1	101	70-130	09/01/2015 0922
Dichlorodifluoromethane	50	67		1	134	60-140	09/01/2015 0922
1,2-Dichloroethane	50	53		1	107	70-130	09/01/2015 0922
1,1-Dichloroethane	50	52		1	105	70-130	09/01/2015 0922
trans-1,2-Dichloroethene	50	52		1	105	70-130	09/01/2015 0922
cis-1,2-Dichloroethene	50	52		1	104	70-130	09/01/2015 0922
1,1-Dichloroethene	50	54		1	107	70-130	09/01/2015 0922
1,2-Dichloropropane	50	52		1	104	70-130	09/01/2015 0922
trans-1,3-Dichloropropene	50	52		1	104	70-130	09/01/2015 0922
cis-1,3-Dichloropropene	50	54		1	107	70-130	09/01/2015 0922
Ethylbenzene	50	53		1	106	70-130	09/01/2015 0922
2-Hexanone	100	110		1	109	60-140	09/01/2015 0922
Isopropylbenzene	50	53		1	105	70-130	09/01/2015 0922
Methyl acetate	50	59		1	118	60-140	09/01/2015 0922
Methyl tertiary butyl ether (MTBE)	50	54		1	109	70-130	09/01/2015 0922
4-Methyl-2-pentanone	100	110		1	112	60-140	09/01/2015 0922
Methylcyclohexane	50	56		1	111	70-130	09/01/2015 0922
Methylene chloride	50	53		1	107	70-130	09/01/2015 0922
Styrene	50	52		1	104	70-130	09/01/2015 0922
1,1,2,2-Tetrachloroethane	50	52		1	103	70-130	09/01/2015 0922
Tetrachloroethene	50	53		1	105	70-130	09/01/2015 0922
Toluene	50	51		1	102	70-130	09/01/2015 0922
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	57		1	115	70-130	09/01/2015 0922
1,2,4-Trichlorobenzene	50	45		1	90	70-130	09/01/2015 0922
1,1,2-Trichloroethane	50	51		1	102	70-130	09/01/2015 0922
1,1,1-Trichloroethane	50	56		1	111	70-130	09/01/2015 0922

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ83869-002

Matrix: Aqueous

Batch: 83869

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	51		1	103	70-130	09/01/2015 0922
Trichlorofluoromethane	50	59		1	119	70-130	09/01/2015 0922
Vinyl chloride	50	56		1	113	70-130	09/01/2015 0922
Xylenes (total)	100	100		1	104	70-130	09/01/2015 0922
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		82	70-130				
1,2-Dichloroethane-d4		74	70-130				
Toluene-d8		77	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: QH27050-001MS

Matrix: Aqueous

Batch: 83869

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	ND	1000	1600	N	10	156	60-140	09/01/2015 1918
Benzene	ND	500	500		10	101	70-130	09/01/2015 1918
Bromodichloromethane	ND	500	550		10	109	71-143	09/01/2015 1918
Bromoform	ND	500	470		10	94	65-131	09/01/2015 1918
Bromomethane (Methyl bromide)	ND	500	450		10	90	36-168	09/01/2015 1918
2-Butanone (MEK)	ND	1000	1200		10	118	60-140	09/01/2015 1918
Carbon disulfide	ND	500	420		10	84	60-140	09/01/2015 1918
Carbon tetrachloride	ND	500	570		10	114	37-166	09/01/2015 1918
Chlorobenzene	ND	500	490		10	98	78-129	09/01/2015 1918
Chloroethane	ND	500	450		10	90	60-140	09/01/2015 1918
Chloroform	0.75	500	520		10	104	63-123	09/01/2015 1918
Chloromethane (Methyl chloride)	ND	500	470		10	93	20-158	09/01/2015 1918
Cyclohexane	ND	500	480		10	96	70-130	09/01/2015 1918
1,2-Dibromo-3-chloropropane (DBCP)	ND	500	500		10	100	70-130	09/01/2015 1918
Dibromochloromethane	ND	500	510		10	101	74-134	09/01/2015 1918
1,2-Dibromoethane (EDB)	ND	500	500		10	99	70-130	09/01/2015 1918
1,2-Dichlorobenzene	ND	500	490		10	98	70-130	09/01/2015 1918
1,3-Dichlorobenzene	ND	500	480		10	97	70-130	09/01/2015 1918
1,4-Dichlorobenzene	ND	500	470		10	95	70-130	09/01/2015 1918
Dichlorodifluoromethane	ND	500	590		10	118	10-158	09/01/2015 1918
1,1-Dichloroethane	ND	500	510		10	102	69-132	09/01/2015 1918
1,2-Dichloroethane	ND	500	590		10	119	70-130	09/01/2015 1918
1,1-Dichloroethene	ND	500	490		10	98	50-132	09/01/2015 1918
cis-1,2-Dichloroethene	ND	500	500		10	100	70-130	09/01/2015 1918
trans-1,2-Dichloroethene	ND	500	510		10	102	70-130	09/01/2015 1918
1,2-Dichloropropane	ND	500	500		10	100	71-126	09/01/2015 1918
cis-1,3-Dichloropropene	ND	500	460		10	92	69-130	09/01/2015 1918
trans-1,3-Dichloropropene	ND	500	440		10	89	73-131	09/01/2015 1918
Ethylbenzene	ND	500	490		10	99	70-130	09/01/2015 1918
2-Hexanone	ND	1000	1100		10	107	60-140	09/01/2015 1918
Isopropylbenzene	ND	500	470		10	93	70-130	09/01/2015 1918
Methyl acetate	ND	500	610		10	122	15-128	09/01/2015 1918
Methyl tertiary butyl ether (MTBE)	ND	500	550		10	111	70-130	09/01/2015 1918
4-Methyl-2-pentanone	ND	1000	1100		10	115	60-140	09/01/2015 1918
Methylcyclohexane	ND	500	450		10	91	70-130	09/01/2015 1918
Methylene chloride	ND	500	490		10	98	69-129	09/01/2015 1918
Styrene	ND	500	510		10	102	70-130	09/01/2015 1918
1,1,2,2-Tetrachloroethane	ND	500	470		10	94	60-155	09/01/2015 1918
Tetrachloroethene	ND	500	490		10	97	70-130	09/01/2015 1918
Toluene	ND	500	480		10	97	70-130	09/01/2015 1918
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	500	490		10	97	70-130	09/01/2015 1918
1,2,4-Trichlorobenzene	ND	500	490		10	99	70-130	09/01/2015 1918
1,1,1-Trichloroethane	ND	500	580		10	116	77-132	09/01/2015 1918
1,1,2-Trichloroethane	ND	500	490		10	99	77-132	09/01/2015 1918

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: QH27050-001MS

Matrix: Aqueous

Batch: 83869

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	17	500	520		10	101	73-124	09/01/2015 1918
Trichlorofluoromethane	ND	500	550		10	110	60-140	09/01/2015 1918
Vinyl chloride	ND	500	460		10	92	29-159	09/01/2015 1918
Xylenes (total)	ND	1000	990		10	99	70-130	09/01/2015 1918
Surrogate	Q	% Rec	Acceptance Limit					
1,2-Dichloroethane-d4		117	70-130					
Bromofluorobenzene		102	70-130					
Toluene-d8		97	70-130					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: QH27050-001MD

Matrix: Aqueous

Batch: 83869

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	ND	1000	1500	N	10	149	4.5	60-140	20	09/01/2015 1942
Benzene	ND	500	500		10	101	0.091	70-130	20	09/01/2015 1942
Bromodichloromethane	ND	500	530		10	106	2.8	71-143	20	09/01/2015 1942
Bromoform	ND	500	450		10	91	2.9	65-131	20	09/01/2015 1942
Bromomethane (Methyl bromide)	ND	500	490		10	98	8.6	36-168	20	09/01/2015 1942
2-Butanone (MEK)	ND	1000	1200		10	118	0.55	60-140	20	09/01/2015 1942
Carbon disulfide	ND	500	430		10	85	1.5	60-140	20	09/01/2015 1942
Carbon tetrachloride	ND	500	550		10	110	3.1	37-166	20	09/01/2015 1942
Chlorobenzene	ND	500	490		10	98	0.17	78-129	20	09/01/2015 1942
Chloroethane	ND	500	490		10	97	8.3	60-140	20	09/01/2015 1942
Chloroform	0.75	500	520		10	104	0.89	63-123	20	09/01/2015 1942
Chloromethane (Methyl chloride)	ND	500	540		10	107	14	20-158	20	09/01/2015 1942
Cyclohexane	ND	500	460		10	93	3.1	70-130	20	09/01/2015 1942
1,2-Dibromo-3-chloropropane (DBCP)	ND	500	480		10	95	4.4	70-130	20	09/01/2015 1942
Dibromochloromethane	ND	500	500		10	100	1.1	74-134	20	09/01/2015 1942
1,2-Dibromoethane (EDB)	ND	500	500		10	99	0.073	70-130	20	09/01/2015 1942
1,2-Dichlorobenzene	ND	500	490		10	98	0.70	70-130	20	09/01/2015 1942
1,3-Dichlorobenzene	ND	500	470		10	95	1.9	70-130	20	09/01/2015 1942
1,4-Dichlorobenzene	ND	500	470		10	93	1.7	70-130	20	09/01/2015 1942
Dichlorodifluoromethane	ND	500	600		10	119	1.4	10-158	20	09/01/2015 1942
1,1-Dichloroethane	ND	500	520		10	103	1.2	69-132	20	09/01/2015 1942
1,2-Dichloroethane	ND	500	570		10	114	4.1	70-130	20	09/01/2015 1942
1,1-Dichloroethene	ND	500	500		10	100	1.8	50-132	20	09/01/2015 1942
cis-1,2-Dichloroethene	ND	500	510		10	102	1.5	70-130	20	09/01/2015 1942
trans-1,2-Dichloroethene	ND	500	510		10	102	0.20	70-130	20	09/01/2015 1942
1,2-Dichloropropane	ND	500	500		10	101	0.80	71-126	20	09/01/2015 1942
cis-1,3-Dichloropropene	ND	500	450		10	90	2.6	69-130	20	09/01/2015 1942
trans-1,3-Dichloropropene	ND	500	430		10	86	3.6	73-131	20	09/01/2015 1942
Ethylbenzene	ND	500	490		10	97	1.4	70-130	20	09/01/2015 1942
2-Hexanone	ND	1000	1000		10	104	2.9	60-140	20	09/01/2015 1942
Isopropylbenzene	ND	500	470		10	93	0.40	70-130	20	09/01/2015 1942
Methyl acetate	ND	500	590		10	117	4.0	15-128	20	09/01/2015 1942
Methyl tertiary butyl ether (MTBE)	ND	500	560		10	112	1.3	70-130	20	09/01/2015 1942
4-Methyl-2-pentanone	ND	1000	1100		10	111	2.8	60-140	20	09/01/2015 1942
Methylcyclohexane	ND	500	450		10	89	1.5	70-130	20	09/01/2015 1942
Methylene chloride	ND	500	500		10	100	1.3	69-129	20	09/01/2015 1942
Styrene	ND	500	500		10	100	1.9	70-130	20	09/01/2015 1942
1,1,2,2-Tetrachloroethane	ND	500	480		10	95	2.1	60-155	20	09/01/2015 1942
Tetrachloroethene	ND	500	470		10	94	2.8	70-130	20	09/01/2015 1942
Toluene	ND	500	480		10	96	1.3	70-130	20	09/01/2015 1942
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	500	480		10	97	0.55	70-130	20	09/01/2015 1942
1,2,4-Trichlorobenzene	ND	500	470		10	95	4.0	70-130	20	09/01/2015 1942
1,1,1-Trichloroethane	ND	500	570		10	113	2.1	77-132	20	09/01/2015 1942
1,1,2-Trichloroethane	ND	500	500		10	99	0.37	77-132	20	09/01/2015 1942

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: QH27050-001MD

Matrix: Aqueous

Batch: 83869

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
Trichloroethene	17	500	510		10	101	0.36	73-124	20	09/01/2015 1942	
Trichlorofluoromethane	ND	500	540		10	108	2.1	60-140	20	09/01/2015 1942	
Vinyl chloride	ND	500	530		10	107	15	29-159	20	09/01/2015 1942	
Xylenes (total)	ND	1000	980		10	98	0.54	70-130	20	09/01/2015 1942	
Surrogate	Q	% Rec	Acceptance Limit								
1,2-Dichloroethane-d4		113	70-130								
Bromofluorobenzene		99	70-130								
Toluene-d8		95	70-130								

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ83958-001

Matrix: Aqueous

Batch: 83958

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	09/02/2015 0934
Benzene	ND		1	5.0	0.21	ug/L	09/02/2015 0934
Bromodichloromethane	ND		1	5.0	0.23	ug/L	09/02/2015 0934
Bromoform	ND		1	5.0	0.35	ug/L	09/02/2015 0934
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	09/02/2015 0934
2-Butanone (MEK)	ND		1	10	1.8	ug/L	09/02/2015 0934
Carbon disulfide	ND		1	5.0	0.45	ug/L	09/02/2015 0934
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	09/02/2015 0934
Chlorobenzene	ND		1	5.0	0.20	ug/L	09/02/2015 0934
Chloroethane	ND		1	5.0	0.28	ug/L	09/02/2015 0934
Chloroform	ND		1	5.0	0.21	ug/L	09/02/2015 0934
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	09/02/2015 0934
Cyclohexane	ND		1	5.0	0.30	ug/L	09/02/2015 0934
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	09/02/2015 0934
Dibromochloromethane	ND		1	5.0	0.23	ug/L	09/02/2015 0934
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	09/02/2015 0934
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	09/02/2015 0934
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	09/02/2015 0934
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	09/02/2015 0934
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	09/02/2015 0934
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	09/02/2015 0934
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	09/02/2015 0934
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	09/02/2015 0934
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	09/02/2015 0934
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	09/02/2015 0934
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	09/02/2015 0934
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	09/02/2015 0934
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	09/02/2015 0934
Ethylbenzene	ND		1	5.0	0.21	ug/L	09/02/2015 0934
2-Hexanone	ND		1	10	0.26	ug/L	09/02/2015 0934
Isopropylbenzene	ND		1	5.0	0.14	ug/L	09/02/2015 0934
Methyl acetate	ND		1	5.0	0.24	ug/L	09/02/2015 0934
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	09/02/2015 0934
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	09/02/2015 0934
Methylcyclohexane	ND		1	5.0	0.16	ug/L	09/02/2015 0934
Methylene chloride	ND		1	5.0	0.42	ug/L	09/02/2015 0934
Styrene	ND		1	5.0	0.13	ug/L	09/02/2015 0934
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	09/02/2015 0934
Tetrachloroethene	ND		1	5.0	0.22	ug/L	09/02/2015 0934
Toluene	ND		1	5.0	0.24	ug/L	09/02/2015 0934
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	09/02/2015 0934
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	09/02/2015 0934
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	09/02/2015 0934
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	09/02/2015 0934

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ83958-001

Matrix: Aqueous

Batch: 83958

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	09/02/2015 0934
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	09/02/2015 0934
Vinyl chloride	ND		1	2.0	0.50	ug/L	09/02/2015 0934
Xylenes (total)	ND		1	5.0	0.32	ug/L	09/02/2015 0934
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		90	70-130				
1,2-Dichloroethane-d4		92	70-130				
Toluene-d8		93	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ83958-002

Matrix: Aqueous

Batch: 83958

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	108	60-140	09/02/2015 0835
Benzene	50	53		1	106	70-130	09/02/2015 0835
Bromodichloromethane	50	54		1	108	70-130	09/02/2015 0835
Bromoform	50	56		1	113	70-130	09/02/2015 0835
Bromomethane (Methyl bromide)	50	52		1	104	60-140	09/02/2015 0835
2-Butanone (MEK)	100	110		1	111	60-140	09/02/2015 0835
Carbon disulfide	50	56		1	112	60-140	09/02/2015 0835
Carbon tetrachloride	50	56		1	112	70-130	09/02/2015 0835
Chlorobenzene	50	52		1	104	70-130	09/02/2015 0835
Chloroethane	50	54		1	109	60-140	09/02/2015 0835
Chloroform	50	51		1	102	70-130	09/02/2015 0835
Chloromethane (Methyl chloride)	50	52		1	105	60-140	09/02/2015 0835
Cyclohexane	50	57		1	114	70-130	09/02/2015 0835
1,2-Dibromo-3-chloropropane (DBCP)	50	53		1	106	70-130	09/02/2015 0835
Dibromochloromethane	50	57		1	113	70-130	09/02/2015 0835
1,2-Dibromoethane (EDB)	50	53		1	105	70-130	09/02/2015 0835
1,4-Dichlorobenzene	50	52		1	105	70-130	09/02/2015 0835
1,3-Dichlorobenzene	50	53		1	105	70-130	09/02/2015 0835
1,2-Dichlorobenzene	50	53		1	107	70-130	09/02/2015 0835
Dichlorodifluoromethane	50	55		1	110	60-140	09/02/2015 0835
1,2-Dichloroethane	50	53		1	107	70-130	09/02/2015 0835
1,1-Dichloroethane	50	54		1	107	70-130	09/02/2015 0835
trans-1,2-Dichloroethene	50	55		1	110	70-130	09/02/2015 0835
cis-1,2-Dichloroethene	50	53		1	106	70-130	09/02/2015 0835
1,1-Dichloroethene	50	58		1	115	70-130	09/02/2015 0835
1,2-Dichloropropane	50	54		1	108	70-130	09/02/2015 0835
cis-1,3-Dichloropropene	50	55		1	110	70-130	09/02/2015 0835
trans-1,3-Dichloropropene	50	55		1	110	70-130	09/02/2015 0835
Ethylbenzene	50	55		1	109	70-130	09/02/2015 0835
2-Hexanone	100	110		1	109	60-140	09/02/2015 0835
Isopropylbenzene	50	55		1	110	70-130	09/02/2015 0835
Methyl acetate	50	59		1	118	60-140	09/02/2015 0835
Methyl tertiary butyl ether (MTBE)	50	54		1	108	70-130	09/02/2015 0835
4-Methyl-2-pentanone	100	110		1	110	60-140	09/02/2015 0835
Methylcyclohexane	50	58		1	116	70-130	09/02/2015 0835
Methylene chloride	50	54		1	107	70-130	09/02/2015 0835
Styrene	50	54		1	108	70-130	09/02/2015 0835
1,1,2,2-Tetrachloroethane	50	53		1	106	70-130	09/02/2015 0835
Tetrachloroethene	50	56		1	111	70-130	09/02/2015 0835
Toluene	50	55		1	110	70-130	09/02/2015 0835
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	59		1	118	70-130	09/02/2015 0835
1,2,4-Trichlorobenzene	50	57		1	115	70-130	09/02/2015 0835
1,1,2-Trichloroethane	50	53		1	107	70-130	09/02/2015 0835
1,1,1-Trichloroethane	50	54		1	108	70-130	09/02/2015 0835

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ83958-002

Matrix: Aqueous

Batch: 83958

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	54		1	108	70-130	09/02/2015 0835
Trichlorofluoromethane	50	55		1	109	70-130	09/02/2015 0835
Vinyl chloride	50	51		1	103	70-130	09/02/2015 0835
Xylenes (total)	100	110		1	109	70-130	09/02/2015 0835
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		89	70-130				
1,2-Dichloroethane-d4		91	70-130				
Toluene-d8		94	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ84037-001

Matrix: Aqueous

Batch: 84037

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	09/02/2015 2121
Benzene	ND		1	5.0	0.21	ug/L	09/02/2015 2121
Bromodichloromethane	ND		1	5.0	0.23	ug/L	09/02/2015 2121
Bromoform	ND		1	5.0	0.35	ug/L	09/02/2015 2121
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	09/02/2015 2121
2-Butanone (MEK)	ND		1	10	1.8	ug/L	09/02/2015 2121
Carbon disulfide	ND		1	5.0	0.45	ug/L	09/02/2015 2121
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	09/02/2015 2121
Chlorobenzene	ND		1	5.0	0.20	ug/L	09/02/2015 2121
Chloroethane	ND		1	5.0	0.28	ug/L	09/02/2015 2121
Chloroform	0.23	J	1	5.0	0.21	ug/L	09/02/2015 2121
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	09/02/2015 2121
Cyclohexane	ND		1	5.0	0.30	ug/L	09/02/2015 2121
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	09/02/2015 2121
Dibromochloromethane	ND		1	5.0	0.23	ug/L	09/02/2015 2121
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	09/02/2015 2121
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	09/02/2015 2121
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	09/02/2015 2121
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	09/02/2015 2121
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	09/02/2015 2121
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	09/02/2015 2121
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	09/02/2015 2121
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	09/02/2015 2121
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	09/02/2015 2121
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	09/02/2015 2121
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	09/02/2015 2121
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	09/02/2015 2121
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	09/02/2015 2121
Ethylbenzene	ND		1	5.0	0.21	ug/L	09/02/2015 2121
2-Hexanone	ND		1	10	0.26	ug/L	09/02/2015 2121
Isopropylbenzene	ND		1	5.0	0.14	ug/L	09/02/2015 2121
Methyl acetate	ND		1	5.0	0.24	ug/L	09/02/2015 2121
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	09/02/2015 2121
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	09/02/2015 2121
Methylcyclohexane	ND		1	5.0	0.16	ug/L	09/02/2015 2121
Methylene chloride	ND		1	5.0	0.42	ug/L	09/02/2015 2121
Styrene	ND		1	5.0	0.13	ug/L	09/02/2015 2121
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	09/02/2015 2121
Tetrachloroethene	ND		1	5.0	0.22	ug/L	09/02/2015 2121
Toluene	ND		1	5.0	0.24	ug/L	09/02/2015 2121
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	09/02/2015 2121
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	09/02/2015 2121
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	09/02/2015 2121
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	09/02/2015 2121

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ84037-001

Matrix: Aqueous

Batch: 84037

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	09/02/2015 2121
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	09/02/2015 2121
Vinyl chloride	ND		1	2.0	0.50	ug/L	09/02/2015 2121
Xylenes (total)	ND		1	5.0	0.32	ug/L	09/02/2015 2121
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		93	70-130				
1,2-Dichloroethane-d4		98	70-130				
Toluene-d8		95	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ84037-002

Matrix: Aqueous

Batch: 84037

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	108	60-140	09/02/2015 2035
Benzene	50	50		1	100	70-130	09/02/2015 2035
Bromodichloromethane	50	51		1	103	70-130	09/02/2015 2035
Bromoform	50	42		1	85	70-130	09/02/2015 2035
Bromomethane (Methyl bromide)	50	49		1	97	60-140	09/02/2015 2035
2-Butanone (MEK)	100	100		1	102	60-140	09/02/2015 2035
Carbon disulfide	50	48		1	96	60-140	09/02/2015 2035
Carbon tetrachloride	50	51		1	102	70-130	09/02/2015 2035
Chlorobenzene	50	48		1	96	70-130	09/02/2015 2035
Chloroethane	50	51		1	102	60-140	09/02/2015 2035
Chloroform	50	46		1	92	70-130	09/02/2015 2035
Chloromethane (Methyl chloride)	50	51		1	101	60-140	09/02/2015 2035
Cyclohexane	50	47		1	94	70-130	09/02/2015 2035
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	97	70-130	09/02/2015 2035
Dibromochloromethane	50	51		1	103	70-130	09/02/2015 2035
1,2-Dibromoethane (EDB)	50	53		1	105	70-130	09/02/2015 2035
1,4-Dichlorobenzene	50	47		1	95	70-130	09/02/2015 2035
1,3-Dichlorobenzene	50	50		1	99	70-130	09/02/2015 2035
1,2-Dichlorobenzene	50	50		1	100	70-130	09/02/2015 2035
Dichlorodifluoromethane	50	56		1	113	60-140	09/02/2015 2035
1,2-Dichloroethane	50	49		1	98	70-130	09/02/2015 2035
1,1-Dichloroethane	50	48		1	96	70-130	09/02/2015 2035
trans-1,2-Dichloroethene	50	49		1	99	70-130	09/02/2015 2035
cis-1,2-Dichloroethene	50	48		1	96	70-130	09/02/2015 2035
1,1-Dichloroethene	50	50		1	99	70-130	09/02/2015 2035
1,2-Dichloropropane	50	48		1	97	70-130	09/02/2015 2035
trans-1,3-Dichloropropene	50	52		1	105	70-130	09/02/2015 2035
cis-1,3-Dichloropropene	50	53		1	105	70-130	09/02/2015 2035
Ethylbenzene	50	49		1	98	70-130	09/02/2015 2035
2-Hexanone	100	110		1	108	60-140	09/02/2015 2035
Isopropylbenzene	50	51		1	102	70-130	09/02/2015 2035
Methyl acetate	50	52		1	104	60-140	09/02/2015 2035
Methyl tertiary butyl ether (MTBE)	50	52		1	105	70-130	09/02/2015 2035
4-Methyl-2-pentanone	100	110		1	107	60-140	09/02/2015 2035
Methylcyclohexane	50	52		1	105	70-130	09/02/2015 2035
Methylene chloride	50	50		1	100	70-130	09/02/2015 2035
Styrene	50	46		1	92	70-130	09/02/2015 2035
1,1,2,2-Tetrachloroethane	50	53		1	106	70-130	09/02/2015 2035
Tetrachloroethene	50	49		1	98	70-130	09/02/2015 2035
Toluene	50	50		1	99	70-130	09/02/2015 2035
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	50		1	100	70-130	09/02/2015 2035
1,2,4-Trichlorobenzene	50	48		1	97	70-130	09/02/2015 2035
1,1,2-Trichloroethane	50	53		1	105	70-130	09/02/2015 2035
1,1,1-Trichloroethane	50	49		1	97	70-130	09/02/2015 2035

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ84037-002

Matrix: Aqueous

Batch: 84037

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	49		1	97	70-130	09/02/2015 2035
Trichlorofluoromethane	50	52		1	104	70-130	09/02/2015 2035
Vinyl chloride	50	50		1	100	70-130	09/02/2015 2035
Xylenes (total)	100	100		1	100	70-130	09/02/2015 2035
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		100	70-130				
1,2-Dichloroethane-d4		94	70-130				
Toluene-d8		95	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 49356

Chain of Custody Record



Client: AECOM Address: 101 Reservoir Ct City: COLUMBIA State: SC Zip Code: 29203 Project Name: Shadesapeake Project No.: 60328303	Report to Contact: Scott Ross Sampler's Signature: <i>[Signature]</i> Printed Name: Justin Butler	Telephone No. / E-mail: 803-201-9462 / scott.ross@aecom.com Analysis (Attach list if more space is needed)	Quote No. _____ Page 1 of 1	QH27050 Remnants / Cooler I.D.
Turn Around Time Required (Prior lab approval required for expedited TAT): <input type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)				
Sample Disposal: <input type="checkbox"/> Return to Client <input type="checkbox"/> Dispose by Lab				
Possible Hazard Identification: <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown				
QC Requirements (Specify)				
1. Requisitioned by: <i>[Signature]</i> Date: 8/27/15 Time: 1750				
2. Requisitioned by: <i>[Signature]</i> Date: _____ Time: _____				
3. Requisitioned by: _____ Date: _____ Time: _____				
4. Requisitioned by: Young Nadering Date: 8/27/15 Time: 1750				
Note: All samples are retained for four weeks from receipt unless other arrangements are made.				
Received on ice (Circle) <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Receipt Temp: 4.9 °C				

Sample ID / Description (Containers for each sample entry to be combined on one site)	Date	Time	Matrix	No. of Containers by Preservative Type					Remnants / Cooler I.D.
				ACID	NOX	NO3	NO2	AS	
MW-8E	8/26/15	1235	6 X				3		X
MW-9E	8/26/15	1415	6 X				3		X
MW-6E	8/26/15	1540	6 X				3		X
MW-5E	8/27/15	1440	6 X				3		X
MW-7E	8/26/15	1550	6 X				3		X
Tri-Blank			X				2		X

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
 Document Number: F-AD-016
 Revision Number: 17

Page 1 of 1
 Replaces Date: 11/07/14
 Effective Date: 04/30/15

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: JGJ / 8/27/15 Lot #: Q1427050

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
2. If custody seals were present, were they intact and unbroken?		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>149/4.9 °C</u> / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
4. Is the commercial courier's packing slip attached to this form?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
5. Were proper custody procedures (relinquished/received) followed?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
5a Were samples relinquished by client to commercial courier?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
6. Were sample IDs listed on the COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
7. Were sample IDs listed on all sample containers?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
8. Was collection date & time listed on the COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
9. Was collection date & time listed on all sample containers?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
10. Did all container label information (ID, date, time) agree with the COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
11. Were tests to be performed listed on the COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
12. Did all samples arrive in the proper containers for each test?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
13. Did all containers arrive in good condition (unbroken, lids on, etc.)?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
14. Was adequate sample volume available?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
15. Were all samples received within ¼ the holding time or 48 hours, whichever comes first?		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
16. Were any samples containers missing?		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
17. Were there any excess samples not listed on COC?		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
18. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
20. Were all cyanide and/or sulfide samples received at a pH >12?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
22. Were collection temperatures documented on the COC for NC samples?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?		
Yes <input checked="" type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input checked="" type="checkbox"/>
24. Was the quote number used taken from the container label?		
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.) Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____ Sample(s) _____ were received with bubbles >6 mm in diameter. Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>JGJ</u> Verified by: _____ Date: <u>8/27/15</u>		

Comments: _____

Report of Analysis

AECOM

4016 Salt Pointe Parkway
North Charleston, SC 29405
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **60328308**

Lot Number: **QH13026**

Date Completed: **08/21/2015**



Nisreen Saikaly
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: QH13026

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: QH13026

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-211	Aqueous	08/12/2015 1440	08/13/2015
002	MW-3I	Aqueous	08/12/2015 1605	08/13/2015
003	MW-20I	Aqueous	08/13/2015 1100	08/13/2015
004	MW-20I-A	Aqueous	08/13/2015 1100	08/13/2015
005	TRIP BLANK	Aqueous	08/12/2015	08/13/2015

(5 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: QH13026

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-21I	Aqueous	Acetone	8260B	4.9	J	ug/L	5
001	MW-21I	Aqueous	Chloroform	8260B	1.6	J	ug/L	5
002	MW-3I	Aqueous	Acetone	8260B	2.4	J	ug/L	7
002	MW-3I	Aqueous	Chloroform	8260B	2.2	J	ug/L	7
002	MW-3I	Aqueous	cis-1,2-Dichloroethene	8260B	2.3	J	ug/L	7
002	MW-3I	Aqueous	Tetrachloroethene	8260B	0.25	J	ug/L	7
002	MW-3I	Aqueous	Trichloroethene	8260B	4.8	J	ug/L	8
003	MW-20I	Aqueous	Chloroform	8260B	2.4	J	ug/L	9
003	MW-20I	Aqueous	cis-1,2-Dichloroethene	8260B	6.2	J	ug/L	9
003	MW-20I	Aqueous	Tetrachloroethene	8260B	2.4	J	ug/L	9
003	MW-20I	Aqueous	Trichloroethene	8260B	460		ug/L	10
004	MW-20I-A	Aqueous	Chloroform	8260B	2.7	J	ug/L	11
004	MW-20I-A	Aqueous	cis-1,2-Dichloroethene	8260B	5.9	J	ug/L	11
004	MW-20I-A	Aqueous	Tetrachloroethene	8260B	2.5	J	ug/L	11
004	MW-20I-A	Aqueous	Trichloroethene	8260B	460		ug/L	12
005	TRIP BLANK	Aqueous	Chloromethane (Methyl	8260B	0.21	J	ug/L	13

(16 detections)

Volatile Organic Compounds by GC/MS

 Client: **AECOM**

 Laboratory ID: **QH13026-001**

 Description: **MW-211**

 Matrix: **Aqueous**

 Date Sampled: **08/12/2015 1440**

 Date Received: **08/13/2015**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	08/19/2015 1512	PAP		82792		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	4.9	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	1.6	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH13026-001
Description: MW-211	Matrix: Aqueous
Date Sampled: 08/12/2015 1440	
Date Received: 08/13/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/19/2015 1512	PAP		82792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		78	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		91	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH13026-002
Description: MW-3I	Matrix: Aqueous
Date Sampled: 08/12/2015 1605	
Date Received: 08/13/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/19/2015 1534	PAP		82792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	2.4	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	2.2	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	2.3	J	5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	0.25	J	5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH13026-002
Description: MW-3I	Matrix: Aqueous
Date Sampled: 08/12/2015 1605	
Date Received: 08/13/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/19/2015 1534	PAP		82792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	4.8	J	5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		74	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		87	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

 Client: **AECOM**

 Laboratory ID: **QH13026-003**

 Description: **MW-20I**

 Matrix: **Aqueous**

 Date Sampled: **08/13/2015 1100**

 Date Received: **08/13/2015**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	08/19/2015 1750	PAP		82792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		100	8.1	ug/L	1
Benzene	71-43-2	8260B	ND		25	1.1	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		25	1.2	ug/L	1
Bromoform	75-25-2	8260B	ND		25	1.8	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	0.95	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	9.1	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		25	2.3	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		25	1.6	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		25	1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		25	1.4	ug/L	1
Chloroform	67-66-3	8260B	2.4	J	25	1.1	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	0.95	ug/L	1
Cyclohexane	110-82-7	8260B	ND		25	1.5	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.8	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		25	1.2	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	0.85	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.3	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	0.95	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	0.95	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		25	4.3	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		25	0.95	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		25	1.2	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		25	1.6	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	6.2	J	25	1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		25	1.7	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		25	1.5	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	1.5	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	1.1	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		25	1.1	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	1.3	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		25	0.70	ug/L	1
Methyl acetate	79-20-9	8260B	ND		25	1.2	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	1.2	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	1.5	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	0.80	ug/L	1
Methylene chloride	75-09-2	8260B	ND		25	2.1	ug/L	1
Styrene	100-42-5	8260B	ND		25	0.65	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	0.65	ug/L	1
Tetrachloroethene	127-18-4	8260B	2.4	J	25	1.1	ug/L	1
Toluene	108-88-3	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	1.5	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	0.65	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	1.1	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH13026-003
Description: MW-20I	Matrix: Aqueous
Date Sampled: 08/13/2015 1100	
Date Received: 08/13/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	08/19/2015 1750	PAP		82792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	460		25	0.80	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		25	3.7	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		10	2.5	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	1.6	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		78	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		89	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH13026-004
Description: MW-20I-A	Matrix: Aqueous
Date Sampled: 08/13/2015 1100	
Date Received: 08/13/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	08/19/2015 1812	PAP		82792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		100	8.1	ug/L	1
Benzene	71-43-2	8260B	ND		25	1.1	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		25	1.2	ug/L	1
Bromoform	75-25-2	8260B	ND		25	1.8	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	0.95	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	9.1	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		25	2.3	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		25	1.6	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		25	1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		25	1.4	ug/L	1
Chloroform	67-66-3	8260B	2.7	J	25	1.1	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	0.95	ug/L	1
Cyclohexane	110-82-7	8260B	ND		25	1.5	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.8	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		25	1.2	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	0.85	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.3	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	0.95	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	0.95	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		25	4.3	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		25	0.95	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		25	1.2	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		25	1.6	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	5.9	J	25	1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		25	1.7	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		25	1.5	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	1.5	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	1.1	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		25	1.1	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	1.3	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		25	0.70	ug/L	1
Methyl acetate	79-20-9	8260B	ND		25	1.2	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	1.2	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	1.5	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	0.80	ug/L	1
Methylene chloride	75-09-2	8260B	ND		25	2.1	ug/L	1
Styrene	100-42-5	8260B	ND		25	0.65	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	0.65	ug/L	1
Tetrachloroethene	127-18-4	8260B	2.5	J	25	1.1	ug/L	1
Toluene	108-88-3	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	1.5	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	0.65	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	1.1	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH13026-004
Description: MW-20I-A	Matrix: Aqueous
Date Sampled: 08/13/2015 1100	
Date Received: 08/13/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	08/19/2015 1812	PAP		82792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	460		25	0.80	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		25	3.7	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		10	2.5	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	1.6	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		79	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		92	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH13026-005
Description: TRIP BLANK	Matrix: Aqueous
Date Sampled: 08/12/2015	
Date Received: 08/13/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/19/2015 1341	PAP		82792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	0.21	J	5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH13026-005
Description: TRIP BLANK	Matrix: Aqueous
Date Sampled: 08/12/2015	
Date Received: 08/13/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/19/2015 1341	PAP		82792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		79	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		91	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ82792-001

Matrix: Aqueous

Batch: 82792

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	08/19/2015 1006
Benzene	ND		1	5.0	0.21	ug/L	08/19/2015 1006
Bromodichloromethane	ND		1	5.0	0.23	ug/L	08/19/2015 1006
Bromoform	ND		1	5.0	0.35	ug/L	08/19/2015 1006
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	08/19/2015 1006
2-Butanone (MEK)	ND		1	10	1.8	ug/L	08/19/2015 1006
Carbon disulfide	ND		1	5.0	0.45	ug/L	08/19/2015 1006
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	08/19/2015 1006
Chlorobenzene	ND		1	5.0	0.20	ug/L	08/19/2015 1006
Chloroethane	ND		1	5.0	0.28	ug/L	08/19/2015 1006
Chloroform	ND		1	5.0	0.21	ug/L	08/19/2015 1006
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	08/19/2015 1006
Cyclohexane	ND		1	5.0	0.30	ug/L	08/19/2015 1006
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	08/19/2015 1006
Dibromochloromethane	ND		1	5.0	0.23	ug/L	08/19/2015 1006
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	08/19/2015 1006
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	08/19/2015 1006
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	08/19/2015 1006
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	08/19/2015 1006
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	08/19/2015 1006
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	08/19/2015 1006
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	08/19/2015 1006
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	08/19/2015 1006
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	08/19/2015 1006
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	08/19/2015 1006
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	08/19/2015 1006
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	08/19/2015 1006
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	08/19/2015 1006
Ethylbenzene	ND		1	5.0	0.21	ug/L	08/19/2015 1006
2-Hexanone	ND		1	10	0.26	ug/L	08/19/2015 1006
Isopropylbenzene	ND		1	5.0	0.14	ug/L	08/19/2015 1006
Methyl acetate	ND		1	5.0	0.24	ug/L	08/19/2015 1006
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	08/19/2015 1006
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	08/19/2015 1006
Methylcyclohexane	ND		1	5.0	0.16	ug/L	08/19/2015 1006
Methylene chloride	ND		1	5.0	0.42	ug/L	08/19/2015 1006
Styrene	ND		1	5.0	0.13	ug/L	08/19/2015 1006
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	08/19/2015 1006
Tetrachloroethene	ND		1	5.0	0.22	ug/L	08/19/2015 1006
Toluene	ND		1	5.0	0.24	ug/L	08/19/2015 1006
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	08/19/2015 1006
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	08/19/2015 1006
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	08/19/2015 1006
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	08/19/2015 1006

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ82792-001

Matrix: Aqueous

Batch: 82792

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	08/19/2015 1006
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	08/19/2015 1006
Vinyl chloride	ND		1	2.0	0.50	ug/L	08/19/2015 1006
Xylenes (total)	ND		1	5.0	0.32	ug/L	08/19/2015 1006
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		108	70-130				
1,2-Dichloroethane-d4		78	70-130				
Toluene-d8		90	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ82792-002

Matrix: Aqueous

Batch: 82792

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	104	60-140	08/19/2015 0902
Benzene	50	53		1	106	70-130	08/19/2015 0902
Bromodichloromethane	50	52		1	104	70-130	08/19/2015 0902
Bromoform	50	52		1	104	70-130	08/19/2015 0902
Bromomethane (Methyl bromide)	50	55		1	110	60-140	08/19/2015 0902
2-Butanone (MEK)	100	110		1	109	60-140	08/19/2015 0902
Carbon disulfide	50	62		1	123	60-140	08/19/2015 0902
Carbon tetrachloride	50	58		1	115	70-130	08/19/2015 0902
Chlorobenzene	50	53		1	105	70-130	08/19/2015 0902
Chloroethane	50	53		1	106	42-163	08/19/2015 0902
Chloroform	50	51		1	102	70-130	08/19/2015 0902
Chloromethane (Methyl chloride)	50	55		1	111	60-140	08/19/2015 0902
Cyclohexane	50	58		1	117	70-130	08/19/2015 0902
1,2-Dibromo-3-chloropropane (DBCP)	50	46		1	93	70-130	08/19/2015 0902
Dibromochloromethane	50	52		1	103	70-130	08/19/2015 0902
1,2-Dibromoethane (EDB)	50	52		1	104	70-130	08/19/2015 0902
1,4-Dichlorobenzene	50	52		1	103	70-130	08/19/2015 0902
1,2-Dichlorobenzene	50	54		1	108	70-130	08/19/2015 0902
1,3-Dichlorobenzene	50	53		1	106	70-130	08/19/2015 0902
Dichlorodifluoromethane	50	62		1	124	60-140	08/19/2015 0902
1,2-Dichloroethane	50	53		1	107	70-130	08/19/2015 0902
1,1-Dichloroethane	50	54		1	108	70-130	08/19/2015 0902
1,1-Dichloroethene	50	57		1	113	70-130	08/19/2015 0902
trans-1,2-Dichloroethene	50	55		1	111	70-130	08/19/2015 0902
cis-1,2-Dichloroethene	50	55		1	110	70-130	08/19/2015 0902
1,2-Dichloropropane	50	52		1	103	70-130	08/19/2015 0902
cis-1,3-Dichloropropene	50	52		1	105	70-130	08/19/2015 0902
trans-1,3-Dichloropropene	50	51		1	103	70-130	08/19/2015 0902
Ethylbenzene	50	53		1	106	70-130	08/19/2015 0902
2-Hexanone	100	100		1	102	60-140	08/19/2015 0902
Isopropylbenzene	50	55		1	110	70-130	08/19/2015 0902
Methyl acetate	50	61		1	122	60-140	08/19/2015 0902
Methyl tertiary butyl ether (MTBE)	50	54		1	109	70-130	08/19/2015 0902
4-Methyl-2-pentanone	100	100		1	102	60-140	08/19/2015 0902
Methylcyclohexane	50	56		1	113	70-130	08/19/2015 0902
Methylene chloride	50	52		1	105	70-130	08/19/2015 0902
Styrene	50	53		1	106	70-130	08/19/2015 0902
1,1,2,2-Tetrachloroethane	50	51		1	102	70-130	08/19/2015 0902
Tetrachloroethene	50	52		1	104	70-130	08/19/2015 0902
Toluene	50	53		1	107	70-130	08/19/2015 0902
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	58		1	116	70-130	08/19/2015 0902
1,2,4-Trichlorobenzene	50	51		1	103	70-130	08/19/2015 0902
1,1,1-Trichloroethane	50	56		1	112	70-130	08/19/2015 0902
1,1,2-Trichloroethane	50	51		1	103	70-130	08/19/2015 0902

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ82792-002

Matrix: Aqueous

Batch: 82792

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	54		1	108	70-130	08/19/2015 0902
Trichlorofluoromethane	50	55		1	110	70-130	08/19/2015 0902
Vinyl chloride	50	55		1	109	70-130	08/19/2015 0902
Xylenes (total)	100	110		1	106	70-130	08/19/2015 0902
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		108	70-130				
1,2-Dichloroethane-d4		75	70-130				
Toluene-d8		92	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
 Document Number: F-AD-016
 Revision Number: 17

Page 1 of 1
 Replaces Date: 11/07/14
 Effective Date: 04/30/15

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: JES / 8/13/15 Lot #: QH13026

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>12.7 / 2.7</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/> 18. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 23. Were client remarks/rcqusts (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	16934 24. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>JES</u> Verified by: _____ Date: <u>8/13/15</u>		

Comments:

Report of Analysis

AECOM

4016 Salt Pointe Parkway
North Charleston, SC 29405
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **60328308.11**

Lot Number: **QG08070**

Date Completed: **07/20/2015**

Date Revised: **08/25/2015**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: QG08070

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Report Revision 08/25/2015

This report is revised to update the Project number.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: QG08070

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-5	Aqueous	07/07/2015 1340	07/08/2015
002	MW-7	Aqueous	07/07/2015 1432	07/08/2015
003	MW-1	Aqueous	07/07/2015 1530	07/08/2015
004	MW-3	Aqueous	07/07/2015 1627	07/08/2015
005	DUP-1	Aqueous	07/07/2015	07/08/2015
006	MW-4	Aqueous	07/08/2015 0905	07/08/2015
007	MW-6	Aqueous	07/08/2015 1000	07/08/2015
008	MW-2	Aqueous	07/08/2015 1055	07/08/2015
009	MW-8	Aqueous	07/08/2015 1147	07/08/2015
010	MW-9	Aqueous	07/08/2015 1305	07/08/2015
011	TMW-32	Aqueous	07/08/2015 1350	07/08/2015
012	TMW-24	Aqueous	07/08/2015 1425	07/08/2015
013	TMW-25	Aqueous	07/08/2015 1515	
014	TRIP BLANK	Aqueous	07/08/2015	07/08/2015

(14 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: QG08070

Sample ID	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-5	Aqueous	Chloroform	8260B	0.90	J	ug/L	6
001	MW-5	Aqueous	Toluene	8260B	0.79	J	ug/L	6
001	MW-5	Aqueous	Trichloroethene	8260B	71		ug/L	7
002	MW-7	Aqueous	Benzene	8260B	0.36	J	ug/L	8
002	MW-7	Aqueous	1,1-Dichloroethane	8260B	1.9	J	ug/L	8
002	MW-7	Aqueous	1,1-Dichloroethene	8260B	3.6	J	ug/L	8
002	MW-7	Aqueous	cis-1,2-Dichloroethene	8260B	110		ug/L	8
002	MW-7	Aqueous	trans-1,2-Dichloroethene	8260B	1.5	J	ug/L	8
002	MW-7	Aqueous	Isopropylbenzene	8260B	2.2	J	ug/L	8
002	MW-7	Aqueous	Tetrachloroethene	8260B	0.81	J	ug/L	8
002	MW-7	Aqueous	Trichloroethene	8260B	69		ug/L	9
002	MW-7	Aqueous	Vinyl chloride	8260B	3.6		ug/L	9
002	MW-7	Aqueous	Barium	6010C	0.13		mg/L	10
002	MW-7	Aqueous	Calcium	6010C	0.54	J	mg/L	10
002	MW-7	Aqueous	Cobalt	6010C	0.0028	J	mg/L	10
002	MW-7	Aqueous	Iron	6010C	0.038	J	mg/L	10
002	MW-7	Aqueous	Magnesium	6010C	0.51	J	mg/L	10
002	MW-7	Aqueous	Manganese	6010C	0.10		mg/L	10
002	MW-7	Aqueous	Mercury	7470A	0.000048	J	mg/L	10
002	MW-7	Aqueous	Potassium	6010C	2.6	J	mg/L	10
002	MW-7	Aqueous	Sodium	6010C	6.4		mg/L	10
002	MW-7	Aqueous	Zinc	6010C	0.0098	J	mg/L	10
003	MW-1	Aqueous	Barium	6010C	0.085		mg/L	13
003	MW-1	Aqueous	Calcium	6010C	0.54	J	mg/L	13
003	MW-1	Aqueous	Cobalt	6010C	0.0029	J	mg/L	13
003	MW-1	Aqueous	Iron	6010C	0.080	J	mg/L	13
003	MW-1	Aqueous	Magnesium	6010C	0.27	J	mg/L	13
003	MW-1	Aqueous	Manganese	6010C	0.13		mg/L	13
003	MW-1	Aqueous	Potassium	6010C	2.6	J	mg/L	13
003	MW-1	Aqueous	Sodium	6010C	3.1	J	mg/L	13
003	MW-1	Aqueous	Zinc	6010C	0.0068	J	mg/L	13
005	DUP-1	Aqueous	Benzene	8260B	0.45	J	ug/L	16
005	DUP-1	Aqueous	1,1-Dichloroethane	8260B	1.8	J	ug/L	16
005	DUP-1	Aqueous	1,1-Dichloroethene	8260B	3.5	J	ug/L	16
005	DUP-1	Aqueous	cis-1,2-Dichloroethene	8260B	110		ug/L	16
005	DUP-1	Aqueous	trans-1,2-Dichloroethene	8260B	1.6	J	ug/L	16
005	DUP-1	Aqueous	Isopropylbenzene	8260B	2.2	J	ug/L	16
005	DUP-1	Aqueous	Trichloroethene	8260B	69		ug/L	17
005	DUP-1	Aqueous	Vinyl chloride	8260B	3.3		ug/L	17
005	DUP-1	Aqueous	Barium	6010C	0.13		mg/L	18
005	DUP-1	Aqueous	Calcium	6010C	0.49	J	mg/L	18
005	DUP-1	Aqueous	Cobalt	6010C	0.0028	J	mg/L	18
005	DUP-1	Aqueous	Magnesium	6010C	0.49	J	mg/L	18
005	DUP-1	Aqueous	Manganese	6010C	0.097		mg/L	18
005	DUP-1	Aqueous	Mercury	7470A	0.000063	J	mg/L	18

Executive Summary (Continued)

Lot Number: QG08070

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
005	DUP-1	Aqueous	Potassium	6010C	2.4	J	mg/L	18
005	DUP-1	Aqueous	Sodium	6010C	6.1		mg/L	18
005	DUP-1	Aqueous	Zinc	6010C	0.0079	J	mg/L	18
006	MW-4	Aqueous	Benzene	8260B	0.53	J	ug/L	19
006	MW-4	Aqueous	cis-1,2-Dichloroethene	8260B	14		ug/L	19
006	MW-4	Aqueous	trans-1,2-Dichloroethene	8260B	0.87	J	ug/L	19
006	MW-4	Aqueous	Trichloroethene	8260B	3.5	J	ug/L	20
007	MW-6	Aqueous	cis-1,2-Dichloroethene	8260B	740		ug/L	21
007	MW-6	Aqueous	trans-1,2-Dichloroethene	8260B	26		ug/L	21
007	MW-6	Aqueous	Isopropylbenzene	8260B	3.1	J	ug/L	21
007	MW-6	Aqueous	Trichloroethene	8260B	64		ug/L	22
007	MW-6	Aqueous	Vinyl chloride	8260B	15		ug/L	22
009	MW-8	Aqueous	Chloroform	8260B	3.1	J	ug/L	25
009	MW-8	Aqueous	1,1-Dichloroethene	8260B	2.8	J	ug/L	25
009	MW-8	Aqueous	cis-1,2-Dichloroethene	8260B	78		ug/L	25
009	MW-8	Aqueous	trans-1,2-Dichloroethene	8260B	3.5	J	ug/L	25
009	MW-8	Aqueous	Isopropylbenzene	8260B	0.74	J	ug/L	25
009	MW-8	Aqueous	Tetrachloroethene	8260B	8.4		ug/L	25
009	MW-8	Aqueous	Trichloroethene	8260B	1100		ug/L	26
010	MW-9	Aqueous	cis-1,2-Dichloroethene	8260B	11	J	ug/L	27
010	MW-9	Aqueous	Trichloroethene	8260B	340		ug/L	28
011	TMW-32	Aqueous	Acetone	8260B	11	J	ug/L	29
011	TMW-32	Aqueous	Chloroform	8260B	0.33	J	ug/L	29
011	TMW-32	Aqueous	cis-1,2-Dichloroethene	8260B	3.8	J	ug/L	29
011	TMW-32	Aqueous	Styrene	8260B	23		ug/L	29
011	TMW-32	Aqueous	Trichloroethene	8260B	200		ug/L	30
012	TMW-24	Aqueous	Acetone	8260B	58	J	ug/L	31
012	TMW-24	Aqueous	Chloroform	8260B	2.5	J	ug/L	31
012	TMW-24	Aqueous	cis-1,2-Dichloroethene	8260B	4.0	J	ug/L	31
012	TMW-24	Aqueous	Trichloroethene	8260B	1200		ug/L	32

(75 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-001
Description: MW-5	Matrix: Aqueous
Date Sampled: 07/07/2015 1340	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/10/2015 1635	EH1		79484

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	0.90	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	0.79	J	5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-001
Description: MW-5	Matrix: Aqueous
Date Sampled: 07/07/2015 1340	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/10/2015 1635	EH1		79484

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	71		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		114	70-130
Toluene-d8		114	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

 Client: **AECOM**

 Laboratory ID: **QG08070-002**

 Description: **MW-7**

 Matrix: **Aqueous**

 Date Sampled: **07/07/2015 1432**

 Date Received: **07/08/2015**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/10/2015 1657	EH1		79484

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	0.36	J	5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	1.9	J	5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	3.6	J	5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	110		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	1.5	J	5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	2.2	J	5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	0.81	J	5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-002
Description: MW-7	Matrix: Aqueous
Date Sampled: 07/07/2015 1432	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/10/2015 1657	EH1		79484

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	69		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	3.6		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		111	70-130
Bromofluorobenzene		125	70-130
Toluene-d8		122	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

TAL Metals

Client: AECOM	Laboratory ID: QG08070-002
Description: MW-7	Matrix: Aqueous
Date Sampled: 07/07/2015 1432	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	07/10/2015 1545	COH	07/10/2015 1208	79295
1	3005A	6010C	1	07/10/2015 1642	ECS	07/09/2015 1800	79254

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aluminum	7429-90-5	6010C	ND		0.40	0.095	mg/L	1
Antimony	7440-36-0	6010C	ND		0.020	0.0066	mg/L	1
Arsenic	7440-38-2	6010C	ND		0.015	0.0022	mg/L	1
Barium	7440-39-3	6010C	0.13		0.025	0.0019	mg/L	1
Beryllium	7440-41-7	6010C	ND		0.0050	0.00022	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0050	0.00054	mg/L	1
Calcium	7440-70-2	6010C	0.54	J	5.0	0.13	mg/L	1
Chromium	7440-47-3	6010C	ND		0.010	0.00072	mg/L	1
Cobalt	7440-48-4	6010C	0.0028	J	0.025	0.0013	mg/L	1
Copper	7440-50-8	6010C	ND		0.010	0.0018	mg/L	1
Iron	7439-89-6	6010C	0.038	J	0.10	0.033	mg/L	1
Lead	7439-92-1	6010C	ND		0.010	0.0047	mg/L	1
Magnesium	7439-95-4	6010C	0.51	J	5.0	0.26	mg/L	1
Manganese	7439-96-5	6010C	0.10		0.015	0.00081	mg/L	1
Mercury	7439-97-6	7470A	0.000048	J	0.00010	0.000028	mg/L	1
Nickel	7440-02-0	6010C	ND		0.040	0.0028	mg/L	1
Potassium	7440-09-7	6010C	2.6	J	5.0	0.30	mg/L	1
Selenium	7782-49-2	6010C	ND		0.020	0.0085	mg/L	1
Silver	7440-22-4	6010C	ND		0.010	0.0021	mg/L	1
Sodium	7440-23-5	6010C	6.4		5.0	0.33	mg/L	1
Thallium	7440-28-0	6010C	ND		0.050	0.0049	mg/L	1
Vanadium	7440-62-2	6010C	ND		0.050	0.0026	mg/L	1
Zinc	7440-66-6	6010C	0.0098	J	0.020	0.0022	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-003
Description: MW-1	Matrix: Aqueous
Date Sampled: 07/07/2015 1530	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/10/2015 1720	EH1		79484

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-003
Description: MW-1	Matrix: Aqueous
Date Sampled: 07/07/2015 1530	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/10/2015 1720	EH1		79484

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		111	70-130
Bromofluorobenzene		123	70-130
Toluene-d8		120	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

TAL Metals

Client: AECOM	Laboratory ID: QG08070-003
Description: MW-1	Matrix: Aqueous
Date Sampled: 07/07/2015 1530	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	07/10/2015 1547	COH	07/10/2015 1208	79295
1	3005A	6010C	1	07/10/2015 1647	ECS	07/09/2015 1800	79254

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aluminum	7429-90-5	6010C	ND		0.40	0.095	mg/L	1
Antimony	7440-36-0	6010C	ND		0.020	0.0066	mg/L	1
Arsenic	7440-38-2	6010C	ND		0.015	0.0022	mg/L	1
Barium	7440-39-3	6010C	0.085		0.025	0.0019	mg/L	1
Beryllium	7440-41-7	6010C	ND		0.0050	0.00022	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0050	0.00054	mg/L	1
Calcium	7440-70-2	6010C	0.54	J	5.0	0.13	mg/L	1
Chromium	7440-47-3	6010C	ND		0.010	0.00072	mg/L	1
Cobalt	7440-48-4	6010C	0.0029	J	0.025	0.0013	mg/L	1
Copper	7440-50-8	6010C	ND		0.010	0.0018	mg/L	1
Iron	7439-89-6	6010C	0.080	J	0.10	0.033	mg/L	1
Lead	7439-92-1	6010C	ND		0.010	0.0047	mg/L	1
Magnesium	7439-95-4	6010C	0.27	J	5.0	0.26	mg/L	1
Manganese	7439-96-5	6010C	0.13		0.015	0.00081	mg/L	1
Mercury	7439-97-6	7470A	ND		0.00010	0.000028	mg/L	1
Nickel	7440-02-0	6010C	ND		0.040	0.0028	mg/L	1
Potassium	7440-09-7	6010C	2.6	J	5.0	0.30	mg/L	1
Selenium	7782-49-2	6010C	ND		0.020	0.0085	mg/L	1
Silver	7440-22-4	6010C	ND		0.010	0.0021	mg/L	1
Sodium	7440-23-5	6010C	3.1	J	5.0	0.33	mg/L	1
Thallium	7440-28-0	6010C	ND		0.050	0.0049	mg/L	1
Vanadium	7440-62-2	6010C	ND		0.050	0.0026	mg/L	1
Zinc	7440-66-6	6010C	0.0068	J	0.020	0.0022	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

 Client: **AECOM**

 Laboratory ID: **QG08070-004**

 Description: **MW-3**

 Matrix: **Aqueous**

 Date Sampled: **07/07/2015 1627**

 Date Received: **07/08/2015**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/10/2015 1742	EH1		79484

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-004
Description: MW-3	Matrix: Aqueous
Date Sampled: 07/07/2015 1627	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/10/2015 1742	EH1		79484

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		105	70-130
Bromofluorobenzene		118	70-130
Toluene-d8		115	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-005
Description: DUP-1	Matrix: Aqueous
Date Sampled: 07/07/2015	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/10/2015 1804	EH1		79484

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	0.45	J	5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	1.8	J	5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	3.5	J	5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	110		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	1.6	J	5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	2.2	J	5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-005
Description: DUP-1	Matrix: Aqueous
Date Sampled: 07/07/2015	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/10/2015 1804	EH1		79484

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	69		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	3.3		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		110	70-130
Bromofluorobenzene		124	70-130
Toluene-d8		121	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

TAL Metals

Client: AECOM	Laboratory ID: QG08070-005
Description: DUP-1	Matrix: Aqueous
Date Sampled: 07/07/2015	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	07/10/2015 1549	COH	07/10/2015 1208	79295
1	3005A	6010C	1	07/10/2015 1652	ECS	07/09/2015 1800	79254

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Aluminum	7429-90-5	6010C	ND		0.40	0.095	mg/L	1
Antimony	7440-36-0	6010C	ND		0.020	0.0066	mg/L	1
Arsenic	7440-38-2	6010C	ND		0.015	0.0022	mg/L	1
Barium	7440-39-3	6010C	0.13		0.025	0.0019	mg/L	1
Beryllium	7440-41-7	6010C	ND		0.0050	0.00022	mg/L	1
Cadmium	7440-43-9	6010C	ND		0.0050	0.00054	mg/L	1
Calcium	7440-70-2	6010C	0.49	J	5.0	0.13	mg/L	1
Chromium	7440-47-3	6010C	ND		0.010	0.00072	mg/L	1
Cobalt	7440-48-4	6010C	0.0028	J	0.025	0.0013	mg/L	1
Copper	7440-50-8	6010C	ND		0.010	0.0018	mg/L	1
Iron	7439-89-6	6010C	ND		0.10	0.033	mg/L	1
Lead	7439-92-1	6010C	ND		0.010	0.0047	mg/L	1
Magnesium	7439-95-4	6010C	0.49	J	5.0	0.26	mg/L	1
Manganese	7439-96-5	6010C	0.097		0.015	0.00081	mg/L	1
Mercury	7439-97-6	7470A	0.000063	J	0.00010	0.000028	mg/L	1
Nickel	7440-02-0	6010C	ND		0.040	0.0028	mg/L	1
Potassium	7440-09-7	6010C	2.4	J	5.0	0.30	mg/L	1
Selenium	7782-49-2	6010C	ND		0.020	0.0085	mg/L	1
Silver	7440-22-4	6010C	ND		0.010	0.0021	mg/L	1
Sodium	7440-23-5	6010C	6.1		5.0	0.33	mg/L	1
Thallium	7440-28-0	6010C	ND		0.050	0.0049	mg/L	1
Vanadium	7440-62-2	6010C	ND		0.050	0.0026	mg/L	1
Zinc	7440-66-6	6010C	0.0079	J	0.020	0.0022	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
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 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

 Client: **AECOM**

 Laboratory ID: **QG08070-006**

 Description: **MW-4**

 Matrix: **Aqueous**

 Date Sampled: **07/08/2015 0905**

 Date Received: **07/08/2015**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/10/2015 1826	EH1		79484

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	0.53	J	5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	14		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	0.87	J	5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit
 B = Detected in the method blank
 E = Quantitation of compound exceeded the calibration range
 H = Out of holding time
 ND = Not detected at or above the MDL
 J = Estimated result < PQL and ≥ MDL
 P = The RPD between two GC columns exceeds 40%
 N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-006
Description: MW-4	Matrix: Aqueous
Date Sampled: 07/08/2015 0905	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/10/2015 1826	EH1		79484

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	3.5	J	5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		112	70-130
Bromofluorobenzene		123	70-130
Toluene-d8		120	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-007
Description: MW-6	Matrix: Aqueous
Date Sampled: 07/08/2015 1000	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/10/2015 1849	EH1		79484

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		100	8.1	ug/L	1
Benzene	71-43-2	8260B	ND		25	1.1	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		25	1.2	ug/L	1
Bromoform	75-25-2	8260B	ND		25	1.8	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	0.95	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	9.1	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		25	2.3	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		25	1.6	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		25	1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		25	1.4	ug/L	1
Chloroform	67-66-3	8260B	ND		25	1.1	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	0.95	ug/L	1
Cyclohexane	110-82-7	8260B	ND		25	1.5	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.8	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		25	1.2	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	0.85	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.3	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	0.95	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	0.95	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		25	4.3	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		25	0.95	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		25	1.2	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		25	1.6	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	740		25	1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	26		25	1.7	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		25	1.5	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	1.5	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	1.1	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		25	1.1	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	1.3	ug/L	1
Isopropylbenzene	98-82-8	8260B	3.1	J	25	0.70	ug/L	1
Methyl acetate	79-20-9	8260B	ND		25	1.2	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	1.2	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	1.5	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	0.80	ug/L	1
Methylene chloride	75-09-2	8260B	ND		25	2.1	ug/L	1
Styrene	100-42-5	8260B	ND		25	0.65	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	0.65	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		25	1.1	ug/L	1
Toluene	108-88-3	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	1.5	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	0.65	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	1.1	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-007
Description: MW-6	Matrix: Aqueous
Date Sampled: 07/08/2015 1000	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/10/2015 1849	EH1		79484

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	64		25	0.80	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		25	3.7	ug/L	1
Vinyl chloride	75-01-4	8260B	15		10	2.5	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	8.5	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		112	70-130
Bromofluorobenzene		122	70-130
Toluene-d8		121	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-008
Description: MW-2	Matrix: Aqueous
Date Sampled: 07/08/2015 1055	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	1	07/17/2015 1337	JM1		79967

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	2
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	2
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	2
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	2
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	2
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	2
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	2
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	2
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	2
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	2
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	2
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	2
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	2
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	2
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	2
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	2
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	2
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	2
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	2
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	2
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	2
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	2
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	2
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	2
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	2
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	2

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-008
Description: MW-2	Matrix: Aqueous
Date Sampled: 07/08/2015 1055	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	1	07/17/2015 1337	JM1		79967

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	2
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	2
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		84	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		95	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-009
Description: MW-8	Matrix: Aqueous
Date Sampled: 07/08/2015 1147	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/10/2015 1933	EH1		79484
2	5030B	8260B	20	07/17/2015 1859	JM1		79967

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	3.1	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	2.8	J	5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	78		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	3.5	J	5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	0.74	J	5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	8.4		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-009
Description: MW-8	Matrix: Aqueous
Date Sampled: 07/08/2015 1147	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/10/2015 1933	EH1		79484
2	5030B	8260B	20	07/17/2015 1859	JM1		79967

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1
Trichloroethene	79-01-6	8260B	1100		100	3.2	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		112	70-130		85	70-130
Bromofluorobenzene		122	70-130		110	70-130
Toluene-d8		123	70-130		97	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-010
Description: MW-9	Matrix: Aqueous
Date Sampled: 07/08/2015 1305	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/10/2015 1955	EH1		79484

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		100	8.1	ug/L	1
Benzene	71-43-2	8260B	ND		25	1.1	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		25	1.2	ug/L	1
Bromoform	75-25-2	8260B	ND		25	1.8	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	0.95	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	9.1	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		25	2.3	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		25	1.6	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		25	1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		25	1.4	ug/L	1
Chloroform	67-66-3	8260B	ND		25	1.1	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	0.95	ug/L	1
Cyclohexane	110-82-7	8260B	ND		25	1.5	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.8	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		25	1.2	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	0.85	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.3	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	0.95	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	0.95	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		25	4.3	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		25	0.95	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		25	1.2	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		25	1.6	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	11	J	25	1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		25	1.7	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		25	1.5	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	1.5	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	1.1	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		25	1.1	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	1.3	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		25	0.70	ug/L	1
Methyl acetate	79-20-9	8260B	ND		25	1.2	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	1.2	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	1.5	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	0.80	ug/L	1
Methylene chloride	75-09-2	8260B	ND		25	2.1	ug/L	1
Styrene	100-42-5	8260B	ND		25	0.65	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	0.65	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		25	1.1	ug/L	1
Toluene	108-88-3	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	1.5	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	0.65	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	1.1	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-010
Description: MW-9	Matrix: Aqueous
Date Sampled: 07/08/2015 1305	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/10/2015 1955	EH1		79484

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	340		25	0.80	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		25	3.7	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		10	2.5	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	8.5	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		109	70-130
Bromofluorobenzene		121	70-130
Toluene-d8		122	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-011
Description: TMW-32	Matrix: Aqueous
Date Sampled: 07/08/2015 1350	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/10/2015 2018	EH1		79484
2	5030B	8260B	5	07/17/2015 1921	JM1		79967

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	11	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	0.33	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	3.8	J	5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	23		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-011
Description: TMW-32	Matrix: Aqueous
Date Sampled: 07/08/2015 1350	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/10/2015 2018	EH1		79484
2	5030B	8260B	5	07/17/2015 1921	JM1		79967

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1
Trichloroethene	79-01-6	8260B	200		25	0.80	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		109	70-130		87	70-130
Bromofluorobenzene		126	70-130		115	70-130
Toluene-d8		120	70-130		98	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-012
Description: TMW-24	Matrix: Aqueous
Date Sampled: 07/08/2015 1425	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/10/2015 2040	EH1		79484
2	5030B	8260B	10	07/17/2015 1943	JM1		79967

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	58	J	100	8.1	ug/L	1
Benzene	71-43-2	8260B	ND		25	1.1	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		25	1.2	ug/L	1
Bromoform	75-25-2	8260B	ND		25	1.8	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	0.95	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	9.1	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		25	2.3	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		25	1.6	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		25	1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		25	1.4	ug/L	1
Chloroform	67-66-3	8260B	2.5	J	25	1.1	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	0.95	ug/L	1
Cyclohexane	110-82-7	8260B	ND		25	1.5	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.8	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		25	1.2	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	0.85	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.3	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	0.95	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	0.95	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		25	4.3	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		25	0.95	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		25	1.2	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		25	1.6	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	4.0	J	25	1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		25	1.7	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		25	1.5	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	1.5	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	1.1	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		25	1.1	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	1.3	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		25	0.70	ug/L	1
Methyl acetate	79-20-9	8260B	ND		25	1.2	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	1.2	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	1.5	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	0.80	ug/L	1
Methylene chloride	75-09-2	8260B	ND		25	2.1	ug/L	1
Styrene	100-42-5	8260B	ND		25	0.65	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	0.65	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		25	1.1	ug/L	1
Toluene	108-88-3	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	1.5	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	0.65	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	1.2	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-012
Description: TMW-24	Matrix: Aqueous
Date Sampled: 07/08/2015 1425	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/10/2015 2040	EH1		79484
2	5030B	8260B	10	07/17/2015 1943	JM1		79967

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	1.1	ug/L	1
Trichloroethene	79-01-6	8260B	1200		50	1.6	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		25	3.7	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		10	2.5	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	8.5	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		112	70-130		87	70-130
Bromofluorobenzene		123	70-130		109	70-130
Toluene-d8		121	70-130		98	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-014
Description: TRIP BLANK	Matrix: Aqueous
Date Sampled: 07/08/2015	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/17/2015 1146	JM1		79967

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG08070-014
Description: TRIP BLANK	Matrix: Aqueous
Date Sampled: 07/08/2015	
Date Received: 07/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/17/2015 1146	JM1		79967

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		83	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ79484-001

Matrix: Aqueous

Batch: 79484

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	07/10/2015 1601
Benzene	ND		1	5.0	0.21	ug/L	07/10/2015 1601
Bromodichloromethane	ND		1	5.0	0.23	ug/L	07/10/2015 1601
Bromoform	ND		1	5.0	0.35	ug/L	07/10/2015 1601
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	07/10/2015 1601
2-Butanone (MEK)	ND		1	10	1.8	ug/L	07/10/2015 1601
Carbon disulfide	ND		1	5.0	0.45	ug/L	07/10/2015 1601
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	07/10/2015 1601
Chlorobenzene	ND		1	5.0	0.20	ug/L	07/10/2015 1601
Chloroethane	ND		1	5.0	0.28	ug/L	07/10/2015 1601
Chloroform	ND		1	5.0	0.21	ug/L	07/10/2015 1601
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	07/10/2015 1601
Cyclohexane	ND		1	5.0	0.30	ug/L	07/10/2015 1601
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	07/10/2015 1601
Dibromochloromethane	ND		1	5.0	0.23	ug/L	07/10/2015 1601
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	07/10/2015 1601
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	07/10/2015 1601
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	07/10/2015 1601
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	07/10/2015 1601
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	07/10/2015 1601
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	07/10/2015 1601
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	07/10/2015 1601
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	07/10/2015 1601
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	07/10/2015 1601
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	07/10/2015 1601
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	07/10/2015 1601
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	07/10/2015 1601
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	07/10/2015 1601
Ethylbenzene	ND		1	5.0	0.21	ug/L	07/10/2015 1601
2-Hexanone	ND		1	10	0.26	ug/L	07/10/2015 1601
Isopropylbenzene	ND		1	5.0	0.14	ug/L	07/10/2015 1601
Methyl acetate	ND		1	5.0	0.24	ug/L	07/10/2015 1601
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	07/10/2015 1601
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	07/10/2015 1601
Methylcyclohexane	ND		1	5.0	0.16	ug/L	07/10/2015 1601
Methylene chloride	ND		1	5.0	0.42	ug/L	07/10/2015 1601
Styrene	ND		1	5.0	0.13	ug/L	07/10/2015 1601
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	07/10/2015 1601
Tetrachloroethene	ND		1	5.0	0.22	ug/L	07/10/2015 1601
Toluene	ND		1	5.0	0.24	ug/L	07/10/2015 1601
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	07/10/2015 1601
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	07/10/2015 1601
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	07/10/2015 1601
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	07/10/2015 1601

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ79484-001

Matrix: Aqueous

Batch: 79484

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	07/10/2015 1601
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	07/10/2015 1601
Vinyl chloride	ND		1	2.0	0.50	ug/L	07/10/2015 1601
Xylenes (total)	ND		1	5.0	1.7	ug/L	07/10/2015 1601
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		118	70-130				
1,2-Dichloroethane-d4		102	70-130				
Toluene-d8		117	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ79484-002

Matrix: Aqueous

Batch: 79484

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	104	60-140	07/10/2015 1531
Benzene	50	49		1	99	70-130	07/10/2015 1531
Bromodichloromethane	50	50		1	100	70-130	07/10/2015 1531
Bromoform	50	48		1	95	70-130	07/10/2015 1531
Bromomethane (Methyl bromide)	50	48		1	96	60-140	07/10/2015 1531
2-Butanone (MEK)	100	100		1	101	60-140	07/10/2015 1531
Carbon disulfide	50	52		1	103	60-140	07/10/2015 1531
Carbon tetrachloride	50	52		1	103	70-130	07/10/2015 1531
Chlorobenzene	50	48		1	95	70-130	07/10/2015 1531
Chloroethane	50	44		1	87	42-163	07/10/2015 1531
Chloroform	50	49		1	97	70-130	07/10/2015 1531
Chloromethane (Methyl chloride)	50	50		1	101	60-140	07/10/2015 1531
Cyclohexane	50	49		1	97	70-130	07/10/2015 1531
1,2-Dibromo-3-chloropropane (DBCP)	50	45		1	89	70-130	07/10/2015 1531
Dibromochloromethane	50	48		1	95	70-130	07/10/2015 1531
1,2-Dibromoethane (EDB)	50	48		1	96	70-130	07/10/2015 1531
1,4-Dichlorobenzene	50	49		1	98	70-130	07/10/2015 1531
1,3-Dichlorobenzene	50	50		1	99	70-130	07/10/2015 1531
1,2-Dichlorobenzene	50	49		1	97	70-130	07/10/2015 1531
Dichlorodifluoromethane	50	48		1	95	60-140	07/10/2015 1531
1,2-Dichloroethane	50	49		1	97	70-130	07/10/2015 1531
1,1-Dichloroethane	50	50		1	99	70-130	07/10/2015 1531
trans-1,2-Dichloroethene	50	46		1	92	70-130	07/10/2015 1531
cis-1,2-Dichloroethene	50	46		1	93	70-130	07/10/2015 1531
1,1-Dichloroethene	50	48		1	97	70-130	07/10/2015 1531
1,2-Dichloropropane	50	46		1	92	70-130	07/10/2015 1531
trans-1,3-Dichloropropene	50	42		1	84	70-130	07/10/2015 1531
cis-1,3-Dichloropropene	50	50		1	100	70-130	07/10/2015 1531
Ethylbenzene	50	51		1	103	70-130	07/10/2015 1531
2-Hexanone	100	89		1	89	60-140	07/10/2015 1531
Isopropylbenzene	50	49		1	97	70-130	07/10/2015 1531
Methyl acetate	50	52		1	105	60-140	07/10/2015 1531
Methyl tertiary butyl ether (MTBE)	50	50		1	100	70-130	07/10/2015 1531
4-Methyl-2-pentanone	100	100		1	101	60-140	07/10/2015 1531
Methylcyclohexane	50	46		1	91	70-130	07/10/2015 1531
Methylene chloride	50	49		1	97	70-130	07/10/2015 1531
Styrene	50	51		1	103	70-130	07/10/2015 1531
1,1,2,2-Tetrachloroethane	50	45		1	89	70-130	07/10/2015 1531
Tetrachloroethene	50	45		1	90	70-130	07/10/2015 1531
Toluene	50	44		1	88	70-130	07/10/2015 1531
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	46		1	92	70-130	07/10/2015 1531
1,2,4-Trichlorobenzene	50	55		1	111	70-130	07/10/2015 1531
1,1,2-Trichloroethane	50	47		1	94	70-130	07/10/2015 1531
1,1,1-Trichloroethane	50	51		1	102	70-130	07/10/2015 1531

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ79484-002

Matrix: Aqueous

Batch: 79484

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	51		1	102	70-130	07/10/2015 1531
Trichlorofluoromethane	50	44		1	88	70-130	07/10/2015 1531
Vinyl chloride	50	50		1	101	70-130	07/10/2015 1531
Xylenes (total)	100	100		1	102	70-130	07/10/2015 1531
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		99	70-130				
1,2-Dichloroethane-d4		80	70-130				
Toluene-d8		91	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: QG08070-012MS

Matrix: Aqueous

Batch: 79484

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	58	500	580		5	104	60-140	07/10/2015 2102
Benzene	ND	250	290		5	117	70-130	07/10/2015 2102
Bromodichloromethane	ND	250	300		5	120	71-143	07/10/2015 2102
Bromoform	ND	250	270		5	109	65-131	07/10/2015 2102
Bromomethane (Methyl bromide)	ND	250	270		5	108	36-168	07/10/2015 2102
2-Butanone (MEK)	ND	500	530		5	106	60-140	07/10/2015 2102
Carbon disulfide	ND	250	270		5	109	60-140	07/10/2015 2102
Carbon tetrachloride	ND	250	330		5	130	37-166	07/10/2015 2102
Chlorobenzene	ND	250	280		5	113	78-129	07/10/2015 2102
Chloroethane	ND	250	250		5	101	60-140	07/10/2015 2102
Chloroform	2.5	250	280		5	112	63-123	07/10/2015 2102
Chloromethane (Methyl chloride)	ND	250	280		5	113	20-158	07/10/2015 2102
Cyclohexane	ND	250	290		5	116	70-130	07/10/2015 2102
1,2-Dibromo-3-chloropropane (DBCP)	ND	250	250		5	99	70-130	07/10/2015 2102
Dibromochloromethane	ND	250	270		5	108	74-134	07/10/2015 2102
1,2-Dibromoethane (EDB)	ND	250	280		5	113	70-130	07/10/2015 2102
1,2-Dichlorobenzene	ND	250	290		5	114	70-130	07/10/2015 2102
1,3-Dichlorobenzene	ND	250	290		5	117	70-130	07/10/2015 2102
1,4-Dichlorobenzene	ND	250	280		5	114	70-130	07/10/2015 2102
Dichlorodifluoromethane	ND	250	310		5	122	10-158	07/10/2015 2102
1,1-Dichloroethane	ND	250	280		5	114	69-132	07/10/2015 2102
1,2-Dichloroethane	ND	250	290		5	116	70-130	07/10/2015 2102
1,1-Dichloroethene	ND	250	290		5	116	50-132	07/10/2015 2102
cis-1,2-Dichloroethene	4.0	250	270		5	105	70-130	07/10/2015 2102
trans-1,2-Dichloroethene	ND	250	270		5	109	70-130	07/10/2015 2102
1,2-Dichloropropane	ND	250	270		5	106	71-126	07/10/2015 2102
cis-1,3-Dichloropropene	ND	250	280		5	112	69-130	07/10/2015 2102
trans-1,3-Dichloropropene	ND	250	250		5	98	73-131	07/10/2015 2102
Ethylbenzene	ND	250	310		5	122	70-130	07/10/2015 2102
2-Hexanone	ND	500	480		5	96	60-140	07/10/2015 2102
Isopropylbenzene	ND	250	300		5	119	70-130	07/10/2015 2102
Methyl acetate	ND	250	280		5	112	15-128	07/10/2015 2102
Methyl tertiary butyl ether (MTBE)	ND	250	280		5	110	70-130	07/10/2015 2102
4-Methyl-2-pentanone	ND	500	570		5	114	60-140	07/10/2015 2102
Methylcyclohexane	ND	250	290		5	115	70-130	07/10/2015 2102
Methylene chloride	ND	250	280		5	110	69-129	07/10/2015 2102
Styrene	ND	250	310		5	123	70-130	07/10/2015 2102
1,1,2,2-Tetrachloroethane	ND	250	280		5	110	60-155	07/10/2015 2102
Tetrachloroethene	ND	250	270		5	110	70-130	07/10/2015 2102
Toluene	ND	250	270		5	107	70-130	07/10/2015 2102
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	250	290		5	117	70-130	07/10/2015 2102
1,2,4-Trichlorobenzene	ND	250	320		5	130	70-130	07/10/2015 2102
1,1,1-Trichloroethane	ND	250	310		5	125	77-132	07/10/2015 2102
1,1,2-Trichloroethane	ND	250	270		5	106	77-132	07/10/2015 2102

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: QG08070-012MS

Matrix: Aqueous

Batch: 79484

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	1200	250	1500	E	5	97	73-124	07/10/2015 2102
Trichlorofluoromethane	ND	250	280		5	113	60-140	07/10/2015 2102
Vinyl chloride	ND	250	300		5	119	29-159	07/10/2015 2102
Xylenes (total)	ND	500	620		5	124	70-130	07/10/2015 2102
Surrogate	Q	% Rec	Acceptance Limit					
1,2-Dichloroethane-d4		106	70-130					
Bromofluorobenzene	N	135	70-130					
Toluene-d8		118	70-130					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: QG08070-012MD

Matrix: Aqueous

Batch: 79484

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	58	500	550	5		98	5.1	60-140	20	07/10/2015 2124
Benzene	ND	250	280	5		110	6.2	70-130	20	07/10/2015 2124
Bromodichloromethane	ND	250	270	5		108	10	71-143	20	07/10/2015 2124
Bromoform	ND	250	250	5		100	8.3	65-131	20	07/10/2015 2124
Bromomethane (Methyl bromide)	ND	250	270	5		108	0.41	36-168	20	07/10/2015 2124
2-Butanone (MEK)	ND	500	490	5		98	8.0	60-140	20	07/10/2015 2124
Carbon disulfide	ND	250	260	5		104	3.8	60-140	20	07/10/2015 2124
Carbon tetrachloride	ND	250	290	5		117	10	37-166	20	07/10/2015 2124
Chlorobenzene	ND	250	260	5		106	6.3	78-129	20	07/10/2015 2124
Chloroethane	ND	250	250	5		100	1.7	60-140	20	07/10/2015 2124
Chloroform	2.5	250	260	5		105	6.8	63-123	20	07/10/2015 2124
Chloromethane (Methyl chloride)	ND	250	290	5		114	0.64	20-158	20	07/10/2015 2124
Cyclohexane	ND	250	270	5		108	6.7	70-130	20	07/10/2015 2124
1,2-Dibromo-3-chloropropane (DBCP)	ND	250	220	5		89	10	70-130	20	07/10/2015 2124
Dibromochloromethane	ND	250	250	5		100	7.5	74-134	20	07/10/2015 2124
1,2-Dibromoethane (EDB)	ND	250	260	5		104	7.7	70-130	20	07/10/2015 2124
1,2-Dichlorobenzene	ND	250	270	5		107	6.8	70-130	20	07/10/2015 2124
1,3-Dichlorobenzene	ND	250	280	5		110	5.4	70-130	20	07/10/2015 2124
1,4-Dichlorobenzene	ND	250	270	5		106	6.7	70-130	20	07/10/2015 2124
Dichlorodifluoromethane	ND	250	300	5		119	2.5	10-158	20	07/10/2015 2124
1,1-Dichloroethane	ND	250	270	5		106	6.8	69-132	20	07/10/2015 2124
1,2-Dichloroethane	ND	250	270	5		108	7.7	70-130	20	07/10/2015 2124
1,1-Dichloroethene	ND	250	280	5		111	4.7	50-132	20	07/10/2015 2124
cis-1,2-Dichloroethene	4.0	250	250	5		97	7.4	70-130	20	07/10/2015 2124
trans-1,2-Dichloroethene	ND	250	260	5		103	5.3	70-130	20	07/10/2015 2124
1,2-Dichloropropane	ND	250	250	5		99	7.4	71-126	20	07/10/2015 2124
cis-1,3-Dichloropropene	ND	250	260	5		104	7.8	69-130	20	07/10/2015 2124
trans-1,3-Dichloropropene	ND	250	220	5		90	8.7	73-131	20	07/10/2015 2124
Ethylbenzene	ND	250	290	5		115	5.9	70-130	20	07/10/2015 2124
2-Hexanone	ND	500	470	5		94	2.6	60-140	20	07/10/2015 2124
Isopropylbenzene	ND	250	280	5		111	6.4	70-130	20	07/10/2015 2124
Methyl acetate	ND	250	270	5		107	5.0	15-128	20	07/10/2015 2124
Methyl tertiary butyl ether (MTBE)	ND	250	260	5		105	5.1	70-130	20	07/10/2015 2124
4-Methyl-2-pentanone	ND	500	540	5		108	6.2	60-140	20	07/10/2015 2124
Methylcyclohexane	ND	250	270	5		107	7.4	70-130	20	07/10/2015 2124
Methylene chloride	ND	250	260	5		102	7.3	69-129	20	07/10/2015 2124
Styrene	ND	250	290	5		114	7.2	70-130	20	07/10/2015 2124
1,1,2,2-Tetrachloroethane	ND	250	260	5		104	5.4	60-155	20	07/10/2015 2124
Tetrachloroethene	ND	250	260	5		103	6.4	70-130	20	07/10/2015 2124
Toluene	ND	250	250	5		100	6.5	70-130	20	07/10/2015 2124
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	250	270	5		107	8.7	70-130	20	07/10/2015 2124
1,2,4-Trichlorobenzene	ND	250	300	5		118	9.2	70-130	20	07/10/2015 2124
1,1,1-Trichloroethane	ND	250	290	5		114	9.4	77-132	20	07/10/2015 2124
1,1,2-Trichloroethane	ND	250	250	5		100	6.1	77-132	20	07/10/2015 2124

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: QG08070-012MD

Matrix: Aqueous

Batch: 79484

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
Trichloroethene	1200	250	1400	N	5	66	5.5	73-124	20	07/10/2015 2124	
Trichlorofluoromethane	ND	250	270		5	110	3.2	60-140	20	07/10/2015 2124	
Vinyl chloride	ND	250	310		5	123	2.9	29-159	20	07/10/2015 2124	
Xylenes (total)	ND	500	570		5	114	7.9	70-130	20	07/10/2015 2124	
Surrogate	Q	% Rec	Acceptance Limit								
1,2-Dichloroethane-d4		107	70-130								
Bromofluorobenzene		129	70-130								
Toluene-d8		118	70-130								

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ79967-001

Matrix: Aqueous

Batch: 79967

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	07/17/2015 1102
Benzene	ND		1	5.0	0.21	ug/L	07/17/2015 1102
Bromodichloromethane	ND		1	5.0	0.23	ug/L	07/17/2015 1102
Bromoform	ND		1	5.0	0.35	ug/L	07/17/2015 1102
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	07/17/2015 1102
2-Butanone (MEK)	ND		1	10	1.8	ug/L	07/17/2015 1102
Carbon disulfide	ND		1	5.0	0.45	ug/L	07/17/2015 1102
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	07/17/2015 1102
Chlorobenzene	ND		1	5.0	0.20	ug/L	07/17/2015 1102
Chloroethane	ND		1	5.0	0.28	ug/L	07/17/2015 1102
Chloroform	ND		1	5.0	0.21	ug/L	07/17/2015 1102
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	07/17/2015 1102
Cyclohexane	ND		1	5.0	0.30	ug/L	07/17/2015 1102
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	07/17/2015 1102
Dibromochloromethane	ND		1	5.0	0.23	ug/L	07/17/2015 1102
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	07/17/2015 1102
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	07/17/2015 1102
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	07/17/2015 1102
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	07/17/2015 1102
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	07/17/2015 1102
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	07/17/2015 1102
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	07/17/2015 1102
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	07/17/2015 1102
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	07/17/2015 1102
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	07/17/2015 1102
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	07/17/2015 1102
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	07/17/2015 1102
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	07/17/2015 1102
Ethylbenzene	ND		1	5.0	0.21	ug/L	07/17/2015 1102
2-Hexanone	ND		1	10	0.26	ug/L	07/17/2015 1102
Isopropylbenzene	ND		1	5.0	0.14	ug/L	07/17/2015 1102
Methyl acetate	ND		1	5.0	0.24	ug/L	07/17/2015 1102
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	07/17/2015 1102
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	07/17/2015 1102
Methylcyclohexane	ND		1	5.0	0.16	ug/L	07/17/2015 1102
Methylene chloride	ND		1	5.0	0.42	ug/L	07/17/2015 1102
Styrene	ND		1	5.0	0.13	ug/L	07/17/2015 1102
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	07/17/2015 1102
Tetrachloroethene	ND		1	5.0	0.22	ug/L	07/17/2015 1102
Toluene	ND		1	5.0	0.24	ug/L	07/17/2015 1102
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	07/17/2015 1102
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	07/17/2015 1102
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	07/17/2015 1102
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	07/17/2015 1102

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ79967-001

Matrix: Aqueous

Batch: 79967

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	07/17/2015 1102
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	07/17/2015 1102
Vinyl chloride	ND		1	2.0	0.50	ug/L	07/17/2015 1102
Xylenes (total)	ND		1	5.0	1.7	ug/L	07/17/2015 1102
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		111	70-130				
1,2-Dichloroethane-d4		85	70-130				
Toluene-d8		97	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ79967-002

Matrix: Aqueous

Batch: 79967

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	92		1	92	60-140	07/17/2015 0946
Benzene	50	54		1	108	70-130	07/17/2015 0946
Bromodichloromethane	50	54		1	109	70-130	07/17/2015 0946
Bromoform	50	54		1	108	70-130	07/17/2015 0946
Bromomethane (Methyl bromide)	50	49		1	99	60-140	07/17/2015 0946
2-Butanone (MEK)	100	97		1	97	60-140	07/17/2015 0946
Carbon disulfide	50	56		1	111	60-140	07/17/2015 0946
Carbon tetrachloride	50	49		1	98	70-130	07/17/2015 0946
Chlorobenzene	50	54		1	108	70-130	07/17/2015 0946
Chloroethane	50	46		1	93	42-163	07/17/2015 0946
Chloroform	50	52		1	103	70-130	07/17/2015 0946
Chloromethane (Methyl chloride)	50	46		1	92	60-140	07/17/2015 0946
Cyclohexane	50	51		1	101	70-130	07/17/2015 0946
1,2-Dibromo-3-chloropropane (DBCP)	50	51		1	103	70-130	07/17/2015 0946
Dibromochloromethane	50	54		1	108	70-130	07/17/2015 0946
1,2-Dibromoethane (EDB)	50	54		1	107	70-130	07/17/2015 0946
1,4-Dichlorobenzene	50	53		1	106	70-130	07/17/2015 0946
1,3-Dichlorobenzene	50	54		1	108	70-130	07/17/2015 0946
1,2-Dichlorobenzene	50	54		1	107	70-130	07/17/2015 0946
Dichlorodifluoromethane	50	39		1	79	60-140	07/17/2015 0946
1,2-Dichloroethane	50	54		1	107	70-130	07/17/2015 0946
1,1-Dichloroethane	50	53		1	105	70-130	07/17/2015 0946
trans-1,2-Dichloroethene	50	55		1	110	70-130	07/17/2015 0946
cis-1,2-Dichloroethene	50	53		1	106	70-130	07/17/2015 0946
1,1-Dichloroethene	50	53		1	106	70-130	07/17/2015 0946
1,2-Dichloropropane	50	55		1	110	70-130	07/17/2015 0946
trans-1,3-Dichloropropene	50	54		1	107	70-130	07/17/2015 0946
cis-1,3-Dichloropropene	50	55		1	110	70-130	07/17/2015 0946
Ethylbenzene	50	54		1	108	70-130	07/17/2015 0946
2-Hexanone	100	100		1	103	60-140	07/17/2015 0946
Isopropylbenzene	50	54		1	109	70-130	07/17/2015 0946
Methyl acetate	50	51		1	102	60-140	07/17/2015 0946
Methyl tertiary butyl ether (MTBE)	50	53		1	105	70-130	07/17/2015 0946
4-Methyl-2-pentanone	100	110		1	107	60-140	07/17/2015 0946
Methylcyclohexane	50	49		1	98	70-130	07/17/2015 0946
Methylene chloride	50	53		1	105	70-130	07/17/2015 0946
Styrene	50	54		1	109	70-130	07/17/2015 0946
1,1,2,2-Tetrachloroethane	50	53		1	107	70-130	07/17/2015 0946
Tetrachloroethene	50	54		1	108	70-130	07/17/2015 0946
Toluene	50	56		1	111	70-130	07/17/2015 0946
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	52		1	103	70-130	07/17/2015 0946
1,2,4-Trichlorobenzene	50	55		1	110	70-130	07/17/2015 0946
1,1,2-Trichloroethane	50	54		1	108	70-130	07/17/2015 0946
1,1,1-Trichloroethane	50	53		1	106	70-130	07/17/2015 0946

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ79967-002

Matrix: Aqueous

Batch: 79967

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	53		1	107	70-130	07/17/2015 0946
Trichlorofluoromethane	50	43		1	86	70-130	07/17/2015 0946
Vinyl chloride	50	46		1	93	70-130	07/17/2015 0946
Xylenes (total)	100	110		1	109	70-130	07/17/2015 0946
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		109			70-130		
1,2-Dichloroethane-d4		82			70-130		
Toluene-d8		95			70-130		

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: QG08070-009MS

Matrix: Aqueous

Batch: 79967

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	ND	2000	2100		20	106	60-140	07/17/2015 2006
Benzene	ND	1000	1200		20	118	70-130	07/17/2015 2006
Bromodichloromethane	ND	1000	1200		20	115	71-143	07/17/2015 2006
Bromoform	ND	1000	1100		20	114	65-131	07/17/2015 2006
Bromomethane (Methyl bromide)	ND	1000	1000		20	101	36-168	07/17/2015 2006
2-Butanone (MEK)	ND	2000	2000		20	102	60-140	07/17/2015 2006
Carbon disulfide	ND	1000	1200		20	122	60-140	07/17/2015 2006
Carbon tetrachloride	ND	1000	1200		20	116	37-166	07/17/2015 2006
Chlorobenzene	ND	1000	1200		20	116	78-129	07/17/2015 2006
Chloroethane	ND	1000	1000		20	101	60-140	07/17/2015 2006
Chloroform	3.1	1000	1100		20	113	63-123	07/17/2015 2006
Chloromethane (Methyl chloride)	ND	1000	1000		20	100	20-158	07/17/2015 2006
Cyclohexane	ND	1000	1100		20	111	70-130	07/17/2015 2006
1,2-Dibromo-3-chloropropane (DBCP)	ND	1000	1100		20	108	70-130	07/17/2015 2006
Dibromochloromethane	ND	1000	1200		20	116	74-134	07/17/2015 2006
1,2-Dibromoethane (EDB)	ND	1000	1200		20	116	70-130	07/17/2015 2006
1,2-Dichlorobenzene	ND	1000	1100		20	112	70-130	07/17/2015 2006
1,3-Dichlorobenzene	ND	1000	1100		20	113	70-130	07/17/2015 2006
1,4-Dichlorobenzene	ND	1000	1100		20	111	70-130	07/17/2015 2006
Dichlorodifluoromethane	ND	1000	950		20	95	10-158	07/17/2015 2006
1,1-Dichloroethane	ND	1000	1200		20	116	69-132	07/17/2015 2006
1,2-Dichloroethane	ND	1000	1100		20	115	70-130	07/17/2015 2006
1,1-Dichloroethene	2.8	1000	1300		20	126	50-132	07/17/2015 2006
cis-1,2-Dichloroethene	78	1000	1200		20	117	70-130	07/17/2015 2006
trans-1,2-Dichloroethene	3.5	1000	1200		20	120	70-130	07/17/2015 2006
1,2-Dichloropropane	ND	1000	1200		20	116	71-126	07/17/2015 2006
cis-1,3-Dichloropropene	ND	1000	1100		20	112	69-130	07/17/2015 2006
trans-1,3-Dichloropropene	ND	1000	1100		20	110	73-131	07/17/2015 2006
Ethylbenzene	ND	1000	1200		20	118	70-130	07/17/2015 2006
2-Hexanone	ND	2000	2200		20	110	60-140	07/17/2015 2006
Isopropylbenzene	0.74	1000	1200		20	116	70-130	07/17/2015 2006
Methyl acetate	ND	1000	1100		20	110	15-128	07/17/2015 2006
Methyl tertiary butyl ether (MTBE)	ND	1000	1100		20	111	70-130	07/17/2015 2006
4-Methyl-2-pentanone	ND	2000	2300		20	113	60-140	07/17/2015 2006
Methylcyclohexane	ND	1000	1000		20	100	70-130	07/17/2015 2006
Methylene chloride	ND	1000	1100		20	114	69-129	07/17/2015 2006
Styrene	ND	1000	1200		20	116	70-130	07/17/2015 2006
1,1,2,2-Tetrachloroethane	ND	1000	1200		20	116	60-155	07/17/2015 2006
Tetrachloroethene	8.4	1000	1200		20	118	70-130	07/17/2015 2006
Toluene	ND	1000	1200		20	119	70-130	07/17/2015 2006
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	1100		20	110	70-130	07/17/2015 2006
1,2,4-Trichlorobenzene	ND	1000	1100		20	110	70-130	07/17/2015 2006
1,1,1-Trichloroethane	ND	1000	1200		20	122	77-132	07/17/2015 2006
1,1,2-Trichloroethane	ND	1000	1200		20	116	77-132	07/17/2015 2006

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: QG08070-009MS

Matrix: Aqueous

Batch: 79967

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	1100	1000	2300		20	113	73-124	07/17/2015 2006
Trichlorofluoromethane	ND	1000	1000		20	101	60-140	07/17/2015 2006
Vinyl chloride	ND	1000	1000		20	103	29-159	07/17/2015 2006
Xylenes (total)	ND	2000	2300		20	117	70-130	07/17/2015 2006
Surrogate	Q	% Rec	Acceptance Limit					
1,2-Dichloroethane-d4		85	70-130					
Bromofluorobenzene		113	70-130					
Toluene-d8		98	70-130					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: QG08070-009MD

Matrix: Aqueous

Batch: 79967

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	ND	2000	2200		20	109	3.0	60-140	20	07/17/2015 2028
Benzene	ND	1000	1200		20	119	0.85	70-130	20	07/17/2015 2028
Bromodichloromethane	ND	1000	1200		20	118	2.5	71-143	20	07/17/2015 2028
Bromoform	ND	1000	1100		20	113	0.94	65-131	20	07/17/2015 2028
Bromomethane (Methyl bromide)	ND	1000	1000		20	100	0.97	36-168	20	07/17/2015 2028
2-Butanone (MEK)	ND	2000	2100		20	107	4.4	60-140	20	07/17/2015 2028
Carbon disulfide	ND	1000	1200		20	123	0.42	60-140	20	07/17/2015 2028
Carbon tetrachloride	ND	1000	1100		20	114	1.3	37-166	20	07/17/2015 2028
Chlorobenzene	ND	1000	1100		20	114	1.1	78-129	20	07/17/2015 2028
Chloroethane	ND	1000	1000		20	101	0.36	60-140	20	07/17/2015 2028
Chloroform	3.1	1000	1100		20	113	0.52	63-123	20	07/17/2015 2028
Chloromethane (Methyl chloride)	ND	1000	1000		20	100	0.33	20-158	20	07/17/2015 2028
Cyclohexane	ND	1000	1200		20	117	5.4	70-130	20	07/17/2015 2028
1,2-Dibromo-3-chloropropane (DBCP)	ND	1000	1100		20	109	0.63	70-130	20	07/17/2015 2028
Dibromochloromethane	ND	1000	1200		20	116	0.032	74-134	20	07/17/2015 2028
1,2-Dibromoethane (EDB)	ND	1000	1200		20	116	0.55	70-130	20	07/17/2015 2028
1,2-Dichlorobenzene	ND	1000	1100		20	112	0.0056	70-130	20	07/17/2015 2028
1,3-Dichlorobenzene	ND	1000	1100		20	112	0.82	70-130	20	07/17/2015 2028
1,4-Dichlorobenzene	ND	1000	1100		20	111	0.58	70-130	20	07/17/2015 2028
Dichlorodifluoromethane	ND	1000	970		20	97	2.4	10-158	20	07/17/2015 2028
1,1-Dichloroethane	ND	1000	1200		20	117	1.2	69-132	20	07/17/2015 2028
1,2-Dichloroethane	ND	1000	1200		20	117	1.6	70-130	20	07/17/2015 2028
1,1-Dichloroethene	2.8	1000	1200		20	123	2.8	50-132	20	07/17/2015 2028
cis-1,2-Dichloroethene	78	1000	1300		20	118	1.2	70-130	20	07/17/2015 2028
trans-1,2-Dichloroethene	3.5	1000	1200		20	121	0.79	70-130	20	07/17/2015 2028
1,2-Dichloropropane	ND	1000	1200		20	118	1.2	71-126	20	07/17/2015 2028
cis-1,3-Dichloropropene	ND	1000	1100		20	112	0.30	69-130	20	07/17/2015 2028
trans-1,3-Dichloropropene	ND	1000	1100		20	110	0.65	73-131	20	07/17/2015 2028
Ethylbenzene	ND	1000	1200		20	117	1.1	70-130	20	07/17/2015 2028
2-Hexanone	ND	2000	2200		20	110	0.079	60-140	20	07/17/2015 2028
Isopropylbenzene	0.74	1000	1200		20	117	0.18	70-130	20	07/17/2015 2028
Methyl acetate	ND	1000	1100		20	111	0.34	15-128	20	07/17/2015 2028
Methyl tertiary butyl ether (MTBE)	ND	1000	1100		20	112	0.65	70-130	20	07/17/2015 2028
4-Methyl-2-pentanone	ND	2000	2300		20	116	2.2	60-140	20	07/17/2015 2028
Methylcyclohexane	ND	1000	1100		20	106	6.2	70-130	20	07/17/2015 2028
Methylene chloride	ND	1000	1100		20	114	0.45	69-129	20	07/17/2015 2028
Styrene	ND	1000	1200		20	115	0.63	70-130	20	07/17/2015 2028
1,1,2,2-Tetrachloroethane	ND	1000	1200		20	117	1.0	60-155	20	07/17/2015 2028
Tetrachloroethene	8.4	1000	1200		20	118	0.46	70-130	20	07/17/2015 2028
Toluene	ND	1000	1200		20	118	0.51	70-130	20	07/17/2015 2028
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	1200		20	116	5.9	70-130	20	07/17/2015 2028
1,2,4-Trichlorobenzene	ND	1000	1100		20	113	2.4	70-130	20	07/17/2015 2028
1,1,1-Trichloroethane	ND	1000	1200		20	122	0.18	77-132	20	07/17/2015 2028
1,1,2-Trichloroethane	ND	1000	1200		20	117	0.69	77-132	20	07/17/2015 2028

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: QG08070-009MD

Matrix: Aqueous

Batch: 79967

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
Trichloroethene	1100	1000	2300		20	115	0.69	73-124	20	07/17/2015 2028	
Trichlorofluoromethane	ND	1000	990		20	99	1.8	60-140	20	07/17/2015 2028	
Vinyl chloride	ND	1000	1100		20	105	2.4	29-159	20	07/17/2015 2028	
Xylenes (total)	ND	2000	2300		20	116	0.92	70-130	20	07/17/2015 2028	
Surrogate	Q	% Rec	Acceptance Limit								
1,2-Dichloroethane-d4		85	70-130								
Bromofluorobenzene		113	70-130								
Toluene-d8		99	70-130								

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MB

Sample ID: QQ79254-001

Matrix: Aqueous

Batch: 79254

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 07/09/2015 1800

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Aluminum	ND		1	0.40	0.095	mg/L	07/10/2015 1532
Antimony	ND		1	0.020	0.0066	mg/L	07/10/2015 1532
Arsenic	0.0031	J	1	0.015	0.0022	mg/L	07/10/2015 1532
Barium	ND		1	0.025	0.0019	mg/L	07/10/2015 1532
Beryllium	ND		1	0.0050	0.00022	mg/L	07/10/2015 1532
Cadmium	ND		1	0.0050	0.00054	mg/L	07/10/2015 1532
Calcium	ND		1	5.0	0.13	mg/L	07/10/2015 1532
Chromium	ND		1	0.010	0.00072	mg/L	07/10/2015 1532
Cobalt	ND		1	0.025	0.0013	mg/L	07/10/2015 1532
Copper	ND		1	0.010	0.0018	mg/L	07/10/2015 1532
Iron	ND		1	0.10	0.033	mg/L	07/10/2015 1532
Lead	ND		1	0.010	0.0047	mg/L	07/10/2015 1532
Magnesium	ND		1	5.0	0.26	mg/L	07/10/2015 1532
Manganese	ND		1	0.015	0.00081	mg/L	07/10/2015 1532
Nickel	ND		1	0.040	0.0028	mg/L	07/10/2015 1532
Potassium	ND		1	5.0	0.30	mg/L	07/10/2015 1532
Selenium	ND		1	0.020	0.0085	mg/L	07/10/2015 1532
Silver	ND		1	0.010	0.0021	mg/L	07/10/2015 1532
Sodium	ND		1	5.0	0.33	mg/L	07/10/2015 1532
Thallium	ND		1	0.050	0.0049	mg/L	07/10/2015 1532
Vanadium	ND		1	0.050	0.0026	mg/L	07/10/2015 1532
Zinc	ND		1	0.020	0.0022	mg/L	07/10/2015 1532

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: QQ79254-002

Matrix: Aqueous

Batch: 79254

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 07/09/2015 1800

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Aluminum	20	20		1	99	80-120	07/10/2015 1537
Antimony	0.40	0.38		1	95	80-120	07/10/2015 1537
Arsenic	0.40	0.38		1	94	80-120	07/10/2015 1537
Barium	2.0	2.0		1	98	80-120	07/10/2015 1537
Beryllium	2.0	2.0		1	101	80-120	07/10/2015 1537
Cadmium	0.40	0.37		1	92	80-120	07/10/2015 1537
Calcium	40	40		1	100	80-120	07/10/2015 1537
Chromium	2.0	1.9		1	95	80-120	07/10/2015 1537
Cobalt	2.0	1.9		1	95	80-120	07/10/2015 1537
Copper	2.0	1.9		1	95	80-120	07/10/2015 1537
Iron	20	20		1	99	80-120	07/10/2015 1537
Lead	0.40	0.38		1	96	80-120	07/10/2015 1537
Magnesium	40	40		1	100	80-120	07/10/2015 1537
Manganese	2.0	2.0		1	99	80-120	07/10/2015 1537
Nickel	2.0	1.9		1	95	80-120	07/10/2015 1537
Potassium	40	40		1	101	80-120	07/10/2015 1537
Selenium	0.40	0.38		1	96	80-120	07/10/2015 1537
Silver	0.40	0.38		1	96	80-120	07/10/2015 1537
Sodium	40	40		1	99	80-120	07/10/2015 1537
Thallium	0.80	0.78		1	97	80-120	07/10/2015 1537
Vanadium	2.0	1.9		1	95	80-120	07/10/2015 1537
Zinc	2.0	1.9		1	97	80-120	07/10/2015 1537

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MB

Sample ID: QQ79295-001

Batch: 79295

Analytical Method: 7470A

Matrix: Aqueous

Prep Method: 7470A

Prep Date: 07/10/2015 1208

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Mercury	ND		1	0.00010	0.000028	mg/L	07/10/2015 1504

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: QQ79295-002

Batch: 79295

Analytical Method: 7470A

Matrix: Aqueous

Prep Method: 7470A

Prep Date: 07/10/2015 1208

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0020	0.0020		1	101	80-120	07/10/2015 1506

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

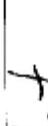
SHEALY ENVIRONMENTAL SERVICES, INC.

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 50355

Chain of Custody Record

Client AECOM	Report to Contact Scott Ross	Telephone No. / Email 803 201 9662 SCOTT.ROSS@AECOM.COM	Quote No. _____
Address 101 RESEARCH DR	Sampler's Signature 	Analysis (Attach list if more space is needed)	Page <u>1</u> of <u>2</u>
City COLUMBIA	Printed Name SCOTT ROSS	Barcode 	Remarks / Cooler I.D. QG08070
Project Name SHAKESPEAR	Project No. _____	Matrix Type: _____ Size: _____ Temp: _____	No. of Containers by Preserving Type Type: _____ Size: _____ Temp: _____
Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	No. of Containers by Preserving Type Type: _____ Size: _____ Temp: _____
MW-5	7-7-15	1340	VOCs (TCL) <input checked="" type="checkbox"/>
MW-7	↓	1432	VOCs (TCL) <input checked="" type="checkbox"/>
MW-1	↓	1530	VOCs (TCL) <input checked="" type="checkbox"/>
MW-3	↓	1627	VOCs (TCL) <input checked="" type="checkbox"/>
DUP-1	↓	—	VOCs (TCL) <input checked="" type="checkbox"/>
MW-4	7-8-15	0905	VOCs (TCL) <input checked="" type="checkbox"/>
MW-6	↓	1000	VOCs (TCL) <input checked="" type="checkbox"/>
MW-2	↓	1055	VOCs (TCL) <input checked="" type="checkbox"/>
MW-8	↓	1147	VOCs (TCL) <input checked="" type="checkbox"/>
MW-9	↓	1305	VOCs (TCL) <input checked="" type="checkbox"/>

Turn Around Time Required (Prior lab approval required for expedited MAT)	Sample Disposal <input checked="" type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab	Possible Hazard Identification <input checked="" type="checkbox"/> No-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	OC Requirements (Specify)
1. Requisitioned by 	Date 7-8-15	Time 1640	Date _____
2. Requisitioned by _____	Date _____	Time _____	Date _____
3. Requisitioned by _____	Date _____	Time _____	Date _____
4. Requisitioned by _____	Date _____	Time _____	Date 7/9/15

LAB USE ONLY
 Received on ice (Circle) No Ice Pack Receipt Temp 5.2 °C

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

SHEALY ENVIRONMENTAL SERVICES, INC.

Number 50358

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Chain of Custody Record



Client ACCION	Report to Contact Scott Ross	Telephone No. / E-mail 803 201 9662	Quote No. _____
Address 101 RESEARCH DR	Sampler's Signature 	Analysis (Attach list if more space is needed) _____	Page 2 of 2
City COLUMBIA	State SC	Zip Code 29203	Barcode
Project Name SNAKE'S PEARL	Printed Name James Lemphert	Remarks / Cooler I.D. _____	_____
Project No. _____	P.O. No. _____	Matrix Type: _____ Qty: _____ No. of Containers by Preservative Type:	_____
Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	No. of Containers by Preservative Type:
TAW-32	7-8-15	1350	3
TAW-24	7-8-15	1405	3
TAW-25	7-8-15	1515	3
Tap Blank	---	---	2
Turn Around Time Required (Prior lab approval required for expedited MAT.) <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)	Sample Disposal <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab	Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	OIC Requirements (Specify)
1. Relinquished by 	Date 7-8-15	Time 1640	Date _____
2. Relinquished by _____	Date _____	Time _____	Date _____
3. Relinquished by _____	Date _____	Time _____	Date _____
4. Relinquished by _____	Date _____	Time _____	Date 7/8/15
Note: All samples are retained for four weeks from receipt unless other arrangements are made.			
LAB USE ONLY Received on ice (Circle) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Ice Pack		Receipt Temp. 5.2 °C	_____

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
 Document Number: F-AD-016
 Revision Number: 17

Page 1 of 1
 Replaces Date: 11/07/14
 Effective Date: 04/30/15

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: JGJ 7/8/15 Lot #: Q608070

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>-15.2/5.2</u> °C / / / °C / / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: _____ IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/> 18. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/> 19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>JGJ</u> Verified by: _____ Date: <u>7/8/15</u>		

Comments:

Sample 013 was missing

Report of Analysis

AECOM

4016 Salt Pointe Parkway
North Charleston, SC 29405
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **60328308.11**

Lot Number: **QG09023**

Date Completed: **07/20/2015**

Date Revised: **08/25/2015**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: QG09023

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Report Revision 08/25/2015

This report is revised to update the Project number.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: QG09023

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	TMW-25	Aqueous	07/08/2015 1515	07/09/2015
002	TMW-31	Aqueous	07/09/2015 0905	07/09/2015
003	TMW-23	Aqueous	07/09/2015 1015	07/09/2015
004	TMW-30	Aqueous	07/09/2015 1055	07/09/2015
005	TMW-22	Aqueous	07/09/2015 1138	07/09/2015
006	TMW-21	Aqueous	07/09/2015 1230	07/09/2015
007	TMW-33	Aqueous	07/09/2015 1320	07/09/2015
008	Trip Blank	Aqueous	07/09/2015	07/09/2015

(8 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: QG09023

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	TMW-25	Aqueous	Acetone	8260B	7.5	J	ug/L	5
001	TMW-25	Aqueous	Chloroform	8260B	0.32	J	ug/L	5
001	TMW-25	Aqueous	Styrene	8260B	2.8	J	ug/L	5
001	TMW-25	Aqueous	Trichloroethene	8260B	15		ug/L	6
002	TMW-31	Aqueous	Acetone	8260B	51	J	ug/L	7
002	TMW-31	Aqueous	cis-1,2-Dichloroethene	8260B	2.0	J	ug/L	7
002	TMW-31	Aqueous	Styrene	8260B	27		ug/L	7
002	TMW-31	Aqueous	Trichloroethene	8260B	330		ug/L	8
003	TMW-23	Aqueous	Acetone	8260B	19	J	ug/L	9
003	TMW-23	Aqueous	cis-1,2-Dichloroethene	8260B	6.3		ug/L	9
003	TMW-23	Aqueous	Styrene	8260B	68		ug/L	9
003	TMW-23	Aqueous	Tetrachloroethene	8260B	0.65	J	ug/L	9
003	TMW-23	Aqueous	Trichloroethene	8260B	92		ug/L	10
004	TMW-30	Aqueous	Acetone	8260B	21		ug/L	11
004	TMW-30	Aqueous	Chloroform	8260B	6.1		ug/L	11
004	TMW-30	Aqueous	cis-1,2-Dichloroethene	8260B	5.6		ug/L	11
004	TMW-30	Aqueous	Styrene	8260B	32		ug/L	11
004	TMW-30	Aqueous	Tetrachloroethene	8260B	0.94	J	ug/L	11
004	TMW-30	Aqueous	1,1,2-Trichloroethane	8260B	0.30	J	ug/L	11
004	TMW-30	Aqueous	Trichloroethene	8260B	150		ug/L	12
005	TMW-22	Aqueous	Acetone	8260B	58	J	ug/L	13
005	TMW-22	Aqueous	Chloroform	8260B	6.6	J	ug/L	13
005	TMW-22	Aqueous	cis-1,2-Dichloroethene	8260B	31		ug/L	13
005	TMW-22	Aqueous	Styrene	8260B	24	J	ug/L	13
005	TMW-22	Aqueous	Tetrachloroethene	8260B	4.4	J	ug/L	13
005	TMW-22	Aqueous	Trichloroethene	8260B	680		ug/L	14
006	TMW-21	Aqueous	Chloroform	8260B	9.5	J	ug/L	15
006	TMW-21	Aqueous	cis-1,2-Dichloroethene	8260B	58	J	ug/L	15
006	TMW-21	Aqueous	Styrene	8260B	8.6	J	ug/L	15
006	TMW-21	Aqueous	Tetrachloroethene	8260B	7.2	J	ug/L	15
006	TMW-21	Aqueous	Trichloroethene	8260B	1000		ug/L	16
007	TMW-33	Aqueous	Chloroform	8260B	3.3	J	ug/L	17
007	TMW-33	Aqueous	Trichloroethene	8260B	240		ug/L	18

(33 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG09023-001
Description: TMW-25	Matrix: Aqueous
Date Sampled: 07/08/2015 1515	
Date Received: 07/09/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/17/2015 1743	JM1		79967

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	7.5	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	0.32	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	2.8	J	5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG09023-001
Description: TMW-25	Matrix: Aqueous
Date Sampled: 07/08/2015 1515	
Date Received: 07/09/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/17/2015 1743	JM1		79967

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	15		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		87	70-130
Bromofluorobenzene		112	70-130
Toluene-d8		97	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG09023-002
Description: TMW-31	Matrix: Aqueous
Date Sampled: 07/09/2015 0905	
Date Received: 07/09/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/18/2015 0455	JJG		80017

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	51	J	100	8.1	ug/L	1
Benzene	71-43-2	8260B	ND		25	1.1	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		25	1.2	ug/L	1
Bromoform	75-25-2	8260B	ND		25	1.8	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	0.95	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	9.1	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		25	2.3	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		25	1.6	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		25	1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		25	1.4	ug/L	1
Chloroform	67-66-3	8260B	ND		25	1.1	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	0.95	ug/L	1
Cyclohexane	110-82-7	8260B	ND		25	1.5	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.8	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		25	1.2	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	0.85	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.3	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	0.95	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	0.95	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		25	4.3	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		25	0.95	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		25	1.2	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		25	1.6	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	2.0	J	25	1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		25	1.7	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		25	1.5	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	1.5	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	1.1	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		25	1.1	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	1.3	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		25	0.70	ug/L	1
Methyl acetate	79-20-9	8260B	ND		25	1.2	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	1.2	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	1.5	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	0.80	ug/L	1
Methylene chloride	75-09-2	8260B	ND		25	2.1	ug/L	1
Styrene	100-42-5	8260B	27		25	0.65	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	0.65	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		25	1.1	ug/L	1
Toluene	108-88-3	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	1.5	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	0.65	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	1.1	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG09023-002
Description: TMW-31	Matrix: Aqueous
Date Sampled: 07/09/2015 0905	
Date Received: 07/09/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/18/2015 0455	JJG		80017

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	330		25	0.80	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		25	3.7	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		10	2.5	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	8.5	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		87	70-130
Bromofluorobenzene		112	70-130
Toluene-d8		98	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG09023-003
Description: TMW-23	Matrix: Aqueous
Date Sampled: 07/09/2015 1015	
Date Received: 07/09/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/18/2015 0024	JJG		80017

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	19	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	6.3		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	68		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	0.65	J	5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG09023-003
Description: TMW-23	Matrix: Aqueous
Date Sampled: 07/09/2015 1015	
Date Received: 07/09/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/18/2015 0024	JJG		80017

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	92		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	70-130
Bromofluorobenzene		114	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG09023-004
Description: TMW-30	Matrix: Aqueous
Date Sampled: 07/09/2015 1055	
Date Received: 07/09/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/18/2015 0047	JJG		80017

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	21		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	6.1		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	5.6		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	32		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	0.94	J	5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	0.30	J	5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG09023-004
Description: TMW-30	Matrix: Aqueous
Date Sampled: 07/09/2015 1055	
Date Received: 07/09/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/18/2015 0047	JJG		80017

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	150		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		85	70-130
Bromofluorobenzene		113	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

 Client: **AECOM**

 Laboratory ID: **QG09023-005**

 Description: **TMW-22**

 Matrix: **Aqueous**

 Date Sampled: **07/09/2015 1138**

 Date Received: **07/09/2015**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	5	07/18/2015 0517	JJG		80017		

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	58	J	100	8.1	ug/L	1
Benzene	71-43-2	8260B	ND		25	1.1	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		25	1.2	ug/L	1
Bromoform	75-25-2	8260B	ND		25	1.8	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	0.95	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	9.1	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		25	2.3	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		25	1.6	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		25	1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		25	1.4	ug/L	1
Chloroform	67-66-3	8260B	6.6	J	25	1.1	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	0.95	ug/L	1
Cyclohexane	110-82-7	8260B	ND		25	1.5	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.8	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		25	1.2	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	0.85	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.3	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	0.95	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	0.95	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		25	4.3	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		25	0.95	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		25	1.2	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		25	1.6	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	31		25	1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		25	1.7	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		25	1.5	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	1.5	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	1.1	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		25	1.1	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	1.3	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		25	0.70	ug/L	1
Methyl acetate	79-20-9	8260B	ND		25	1.2	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	1.2	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	1.5	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	0.80	ug/L	1
Methylene chloride	75-09-2	8260B	ND		25	2.1	ug/L	1
Styrene	100-42-5	8260B	24	J	25	0.65	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	0.65	ug/L	1
Tetrachloroethene	127-18-4	8260B	4.4	J	25	1.1	ug/L	1
Toluene	108-88-3	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	1.5	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	0.65	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	1.1	ug/L	1

PQL = Practical quantitation limit
 B = Detected in the method blank
 E = Quantitation of compound exceeded the calibration range
 H = Out of holding time
 ND = Not detected at or above the MDL
 J = Estimated result < PQL and ≥ MDL
 P = The RPD between two GC columns exceeds 40%
 N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG09023-005
Description: TMW-22	Matrix: Aqueous
Date Sampled: 07/09/2015 1138	
Date Received: 07/09/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/18/2015 0517	JJG		80017

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	680		25	0.80	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		25	3.7	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		10	2.5	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	8.5	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		87	70-130
Bromofluorobenzene		111	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG09023-006
Description: TMW-21	Matrix: Aqueous
Date Sampled: 07/09/2015 1230	
Date Received: 07/09/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	20	07/18/2015 0624	JJG		80017

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		400	32	ug/L	1
Benzene	71-43-2	8260B	ND		100	4.2	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		100	4.6	ug/L	1
Bromoform	75-25-2	8260B	ND		100	7.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		100	3.8	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		200	36	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		100	9.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		100	6.2	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		100	4.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		100	5.6	ug/L	1
Chloroform	67-66-3	8260B	9.5	J	100	4.2	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		100	3.8	ug/L	1
Cyclohexane	110-82-7	8260B	ND		100	6.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		100	11	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		100	4.6	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		100	3.4	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		100	9.2	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		100	3.8	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		100	3.8	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		100	17	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		100	3.8	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		100	4.6	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		100	6.2	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	58	J	100	4.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		100	6.6	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		100	5.8	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		100	6.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		100	4.4	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		100	4.2	ug/L	1
2-Hexanone	591-78-6	8260B	ND		200	5.2	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		100	2.8	ug/L	1
Methyl acetate	79-20-9	8260B	ND		100	4.8	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		100	4.6	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		200	5.8	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		100	3.2	ug/L	1
Methylene chloride	75-09-2	8260B	ND		100	8.4	ug/L	1
Styrene	100-42-5	8260B	8.6	J	100	2.6	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		100	2.6	ug/L	1
Tetrachloroethene	127-18-4	8260B	7.2	J	100	4.4	ug/L	1
Toluene	108-88-3	8260B	ND		100	4.8	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		100	6.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		100	2.6	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		100	4.8	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		100	4.4	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG09023-006
Description: TMW-21	Matrix: Aqueous
Date Sampled: 07/09/2015 1230	
Date Received: 07/09/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	20	07/18/2015 0624	JJG		80017

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	1000		100	3.2	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		100	15	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		40	10	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		100	34	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		87	70-130
Bromofluorobenzene		115	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG09023-007
Description: TMW-33	Matrix: Aqueous
Date Sampled: 07/09/2015 1320	
Date Received: 07/09/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/18/2015 0539	JJG		80017

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		100	8.1	ug/L	1
Benzene	71-43-2	8260B	ND		25	1.1	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		25	1.2	ug/L	1
Bromoform	75-25-2	8260B	ND		25	1.8	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	0.95	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	9.1	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		25	2.3	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		25	1.6	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		25	1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		25	1.4	ug/L	1
Chloroform	67-66-3	8260B	3.3	J	25	1.1	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	0.95	ug/L	1
Cyclohexane	110-82-7	8260B	ND		25	1.5	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.8	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		25	1.2	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	0.85	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.3	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	0.95	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	0.95	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		25	4.3	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		25	0.95	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		25	1.2	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		25	1.6	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		25	1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		25	1.7	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		25	1.5	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	1.5	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	1.1	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		25	1.1	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	1.3	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		25	0.70	ug/L	1
Methyl acetate	79-20-9	8260B	ND		25	1.2	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	1.2	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	1.5	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	0.80	ug/L	1
Methylene chloride	75-09-2	8260B	ND		25	2.1	ug/L	1
Styrene	100-42-5	8260B	ND		25	0.65	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	0.65	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		25	1.1	ug/L	1
Toluene	108-88-3	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	1.5	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	0.65	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	1.1	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG09023-007
Description: TMW-33	Matrix: Aqueous
Date Sampled: 07/09/2015 1320	
Date Received: 07/09/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	07/18/2015 0539	JJG		80017

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	240		25	0.80	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		25	3.7	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		10	2.5	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	8.5	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		84	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		97	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG09023-008
Description: Trip Blank	Matrix: Aqueous
Date Sampled: 07/09/2015	
Date Received: 07/09/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/17/2015 1315	JM1		79967

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QG09023-008
Description: Trip Blank	Matrix: Aqueous
Date Sampled: 07/09/2015	
Date Received: 07/09/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/17/2015 1315	JM1		79967

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		85	70-130
Bromofluorobenzene		109	70-130
Toluene-d8		98	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ79967-001

Matrix: Aqueous

Batch: 79967

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	07/17/2015 1102
Benzene	ND		1	5.0	0.21	ug/L	07/17/2015 1102
Bromodichloromethane	ND		1	5.0	0.23	ug/L	07/17/2015 1102
Bromoform	ND		1	5.0	0.35	ug/L	07/17/2015 1102
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	07/17/2015 1102
2-Butanone (MEK)	ND		1	10	1.8	ug/L	07/17/2015 1102
Carbon disulfide	ND		1	5.0	0.45	ug/L	07/17/2015 1102
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	07/17/2015 1102
Chlorobenzene	ND		1	5.0	0.20	ug/L	07/17/2015 1102
Chloroethane	ND		1	5.0	0.28	ug/L	07/17/2015 1102
Chloroform	ND		1	5.0	0.21	ug/L	07/17/2015 1102
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	07/17/2015 1102
Cyclohexane	ND		1	5.0	0.30	ug/L	07/17/2015 1102
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	07/17/2015 1102
Dibromochloromethane	ND		1	5.0	0.23	ug/L	07/17/2015 1102
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	07/17/2015 1102
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	07/17/2015 1102
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	07/17/2015 1102
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	07/17/2015 1102
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	07/17/2015 1102
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	07/17/2015 1102
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	07/17/2015 1102
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	07/17/2015 1102
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	07/17/2015 1102
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	07/17/2015 1102
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	07/17/2015 1102
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	07/17/2015 1102
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	07/17/2015 1102
Ethylbenzene	ND		1	5.0	0.21	ug/L	07/17/2015 1102
2-Hexanone	ND		1	10	0.26	ug/L	07/17/2015 1102
Isopropylbenzene	ND		1	5.0	0.14	ug/L	07/17/2015 1102
Methyl acetate	ND		1	5.0	0.24	ug/L	07/17/2015 1102
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	07/17/2015 1102
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	07/17/2015 1102
Methylcyclohexane	ND		1	5.0	0.16	ug/L	07/17/2015 1102
Methylene chloride	ND		1	5.0	0.42	ug/L	07/17/2015 1102
Styrene	ND		1	5.0	0.13	ug/L	07/17/2015 1102
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	07/17/2015 1102
Tetrachloroethene	ND		1	5.0	0.22	ug/L	07/17/2015 1102
Toluene	ND		1	5.0	0.24	ug/L	07/17/2015 1102
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	07/17/2015 1102
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	07/17/2015 1102
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	07/17/2015 1102
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	07/17/2015 1102

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ79967-001

Matrix: Aqueous

Batch: 79967

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	07/17/2015 1102
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	07/17/2015 1102
Vinyl chloride	ND		1	2.0	0.50	ug/L	07/17/2015 1102
Xylenes (total)	ND		1	5.0	1.7	ug/L	07/17/2015 1102

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		111	70-130
1,2-Dichloroethane-d4		85	70-130
Toluene-d8		97	70-130

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ79967-002

Matrix: Aqueous

Batch: 79967

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	92		1	92	60-140	07/17/2015 0946
Benzene	50	54		1	108	70-130	07/17/2015 0946
Bromodichloromethane	50	54		1	109	70-130	07/17/2015 0946
Bromoform	50	54		1	108	70-130	07/17/2015 0946
Bromomethane (Methyl bromide)	50	49		1	99	60-140	07/17/2015 0946
2-Butanone (MEK)	100	97		1	97	60-140	07/17/2015 0946
Carbon disulfide	50	56		1	111	60-140	07/17/2015 0946
Carbon tetrachloride	50	49		1	98	70-130	07/17/2015 0946
Chlorobenzene	50	54		1	108	70-130	07/17/2015 0946
Chloroethane	50	46		1	93	42-163	07/17/2015 0946
Chloroform	50	52		1	103	70-130	07/17/2015 0946
Chloromethane (Methyl chloride)	50	46		1	92	60-140	07/17/2015 0946
Cyclohexane	50	51		1	101	70-130	07/17/2015 0946
1,2-Dibromo-3-chloropropane (DBCP)	50	51		1	103	70-130	07/17/2015 0946
Dibromochloromethane	50	54		1	108	70-130	07/17/2015 0946
1,2-Dibromoethane (EDB)	50	54		1	107	70-130	07/17/2015 0946
1,4-Dichlorobenzene	50	53		1	106	70-130	07/17/2015 0946
1,3-Dichlorobenzene	50	54		1	108	70-130	07/17/2015 0946
1,2-Dichlorobenzene	50	54		1	107	70-130	07/17/2015 0946
Dichlorodifluoromethane	50	39		1	79	60-140	07/17/2015 0946
1,2-Dichloroethane	50	54		1	107	70-130	07/17/2015 0946
1,1-Dichloroethane	50	53		1	105	70-130	07/17/2015 0946
trans-1,2-Dichloroethene	50	55		1	110	70-130	07/17/2015 0946
cis-1,2-Dichloroethene	50	53		1	106	70-130	07/17/2015 0946
1,1-Dichloroethene	50	53		1	106	70-130	07/17/2015 0946
1,2-Dichloropropane	50	55		1	110	70-130	07/17/2015 0946
trans-1,3-Dichloropropene	50	54		1	107	70-130	07/17/2015 0946
cis-1,3-Dichloropropene	50	55		1	110	70-130	07/17/2015 0946
Ethylbenzene	50	54		1	108	70-130	07/17/2015 0946
2-Hexanone	100	100		1	103	60-140	07/17/2015 0946
Isopropylbenzene	50	54		1	109	70-130	07/17/2015 0946
Methyl acetate	50	51		1	102	60-140	07/17/2015 0946
Methyl tertiary butyl ether (MTBE)	50	53		1	105	70-130	07/17/2015 0946
4-Methyl-2-pentanone	100	110		1	107	60-140	07/17/2015 0946
Methylcyclohexane	50	49		1	98	70-130	07/17/2015 0946
Methylene chloride	50	53		1	105	70-130	07/17/2015 0946
Styrene	50	54		1	109	70-130	07/17/2015 0946
1,1,2,2-Tetrachloroethane	50	53		1	107	70-130	07/17/2015 0946
Tetrachloroethene	50	54		1	108	70-130	07/17/2015 0946
Toluene	50	56		1	111	70-130	07/17/2015 0946
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	52		1	103	70-130	07/17/2015 0946
1,2,4-Trichlorobenzene	50	55		1	110	70-130	07/17/2015 0946
1,1,2-Trichloroethane	50	54		1	108	70-130	07/17/2015 0946
1,1,1-Trichloroethane	50	53		1	106	70-130	07/17/2015 0946

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ79967-002

Matrix: Aqueous

Batch: 79967

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	53		1	107	70-130	07/17/2015 0946
Trichlorofluoromethane	50	43		1	86	70-130	07/17/2015 0946
Vinyl chloride	50	46		1	93	70-130	07/17/2015 0946
Xylenes (total)	100	110		1	109	70-130	07/17/2015 0946
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		109	70-130				
1,2-Dichloroethane-d4		82	70-130				
Toluene-d8		95	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ80017-001

Matrix: Aqueous

Batch: 80017

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	07/17/2015 2234
Benzene	ND		1	5.0	0.21	ug/L	07/17/2015 2234
Bromodichloromethane	ND		1	5.0	0.23	ug/L	07/17/2015 2234
Bromoform	ND		1	5.0	0.35	ug/L	07/17/2015 2234
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	07/17/2015 2234
2-Butanone (MEK)	ND		1	10	1.8	ug/L	07/17/2015 2234
Carbon disulfide	ND		1	5.0	0.45	ug/L	07/17/2015 2234
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	07/17/2015 2234
Chlorobenzene	ND		1	5.0	0.20	ug/L	07/17/2015 2234
Chloroethane	ND		1	5.0	0.28	ug/L	07/17/2015 2234
Chloroform	ND		1	5.0	0.21	ug/L	07/17/2015 2234
Chloromethane (Methyl chloride)	0.46	J	1	5.0	0.19	ug/L	07/17/2015 2234
Cyclohexane	ND		1	5.0	0.30	ug/L	07/17/2015 2234
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	07/17/2015 2234
Dibromochloromethane	ND		1	5.0	0.23	ug/L	07/17/2015 2234
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	07/17/2015 2234
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	07/17/2015 2234
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	07/17/2015 2234
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	07/17/2015 2234
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	07/17/2015 2234
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	07/17/2015 2234
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	07/17/2015 2234
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	07/17/2015 2234
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	07/17/2015 2234
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	07/17/2015 2234
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	07/17/2015 2234
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	07/17/2015 2234
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	07/17/2015 2234
Ethylbenzene	ND		1	5.0	0.21	ug/L	07/17/2015 2234
2-Hexanone	ND		1	10	0.26	ug/L	07/17/2015 2234
Isopropylbenzene	ND		1	5.0	0.14	ug/L	07/17/2015 2234
Methyl acetate	ND		1	5.0	0.24	ug/L	07/17/2015 2234
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	07/17/2015 2234
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	07/17/2015 2234
Methylcyclohexane	ND		1	5.0	0.16	ug/L	07/17/2015 2234
Methylene chloride	ND		1	5.0	0.42	ug/L	07/17/2015 2234
Styrene	ND		1	5.0	0.13	ug/L	07/17/2015 2234
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	07/17/2015 2234
Tetrachloroethene	ND		1	5.0	0.22	ug/L	07/17/2015 2234
Toluene	ND		1	5.0	0.24	ug/L	07/17/2015 2234
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	07/17/2015 2234
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	07/17/2015 2234
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	07/17/2015 2234
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	07/17/2015 2234

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ80017-001

Matrix: Aqueous

Batch: 80017

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	07/17/2015 2234
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	07/17/2015 2234
Vinyl chloride	ND		1	2.0	0.50	ug/L	07/17/2015 2234
Xylenes (total)	ND		1	5.0	1.7	ug/L	07/17/2015 2234
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		111	70-130				
1,2-Dichloroethane-d4		87	70-130				
Toluene-d8		98	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ80017-002

Matrix: Aqueous

Batch: 80017

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	107	60-140	07/17/2015 2149
Benzene	50	58		1	115	70-130	07/17/2015 2149
Bromodichloromethane	50	56		1	112	70-130	07/17/2015 2149
Bromoform	50	56		1	113	70-130	07/17/2015 2149
Bromomethane (Methyl bromide)	50	51		1	102	60-140	07/17/2015 2149
2-Butanone (MEK)	100	100		1	104	60-140	07/17/2015 2149
Carbon disulfide	50	61		1	122	60-140	07/17/2015 2149
Carbon tetrachloride	50	55		1	110	70-130	07/17/2015 2149
Chlorobenzene	50	57		1	114	70-130	07/17/2015 2149
Chloroethane	50	50		1	100	42-163	07/17/2015 2149
Chloroform	50	54		1	107	70-130	07/17/2015 2149
Chloromethane (Methyl chloride)	50	49		1	98	60-140	07/17/2015 2149
Cyclohexane	50	58		1	116	70-130	07/17/2015 2149
1,2-Dibromo-3-chloropropane (DBCP)	50	56		1	111	70-130	07/17/2015 2149
Dibromochloromethane	50	57		1	114	70-130	07/17/2015 2149
1,2-Dibromoethane (EDB)	50	57		1	113	70-130	07/17/2015 2149
1,3-Dichlorobenzene	50	58		1	117	70-130	07/17/2015 2149
1,4-Dichlorobenzene	50	58		1	116	70-130	07/17/2015 2149
1,2-Dichlorobenzene	50	58		1	116	70-130	07/17/2015 2149
Dichlorodifluoromethane	50	44		1	88	60-140	07/17/2015 2149
1,1-Dichloroethane	50	55		1	111	70-130	07/17/2015 2149
1,2-Dichloroethane	50	56		1	112	70-130	07/17/2015 2149
cis-1,2-Dichloroethene	50	56		1	111	70-130	07/17/2015 2149
1,1-Dichloroethene	50	59		1	117	70-130	07/17/2015 2149
trans-1,2-Dichloroethene	50	58		1	116	70-130	07/17/2015 2149
1,2-Dichloropropane	50	56		1	113	70-130	07/17/2015 2149
cis-1,3-Dichloropropene	50	57		1	113	70-130	07/17/2015 2149
trans-1,3-Dichloropropene	50	56		1	113	70-130	07/17/2015 2149
Ethylbenzene	50	59		1	117	70-130	07/17/2015 2149
2-Hexanone	100	110		1	110	60-140	07/17/2015 2149
Isopropylbenzene	50	60		1	121	70-130	07/17/2015 2149
Methyl acetate	50	55		1	109	60-140	07/17/2015 2149
Methyl tertiary butyl ether (MTBE)	50	55		1	109	70-130	07/17/2015 2149
4-Methyl-2-pentanone	100	110		1	113	60-140	07/17/2015 2149
Methylcyclohexane	50	56		1	111	70-130	07/17/2015 2149
Methylene chloride	50	55		1	110	70-130	07/17/2015 2149
Styrene	50	58		1	116	70-130	07/17/2015 2149
1,1,2,2-Tetrachloroethane	50	58		1	117	70-130	07/17/2015 2149
Tetrachloroethene	50	60		1	119	70-130	07/17/2015 2149
Toluene	50	58		1	116	70-130	07/17/2015 2149
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	59		1	118	70-130	07/17/2015 2149
1,2,4-Trichlorobenzene	50	58		1	117	70-130	07/17/2015 2149
1,1,2-Trichloroethane	50	57		1	114	70-130	07/17/2015 2149
1,1,1-Trichloroethane	50	58		1	115	70-130	07/17/2015 2149

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ80017-002

Matrix: Aqueous

Batch: 80017

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	58		1	116	70-130	07/17/2015 2149
Trichlorofluoromethane	50	51		1	102	70-130	07/17/2015 2149
Vinyl chloride	50	51		1	102	70-130	07/17/2015 2149
Xylenes (total)	100	120		1	115	70-130	07/17/2015 2149
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		111	70-130				
1,2-Dichloroethane-d4		80	70-130				
Toluene-d8		94	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: QG09023-004MS

Matrix: Aqueous

Batch: 80017

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	21	100	97		1	76	60-140	07/18/2015 0647
Benzene	ND	50	56		1	113	70-130	07/18/2015 0647
Bromodichloromethane	ND	50	55		1	110	71-143	07/18/2015 0647
Bromoform	ND	50	52		1	104	65-131	07/18/2015 0647
Bromomethane (Methyl bromide)	ND	50	38		1	77	36-168	07/18/2015 0647
2-Butanone (MEK)	ND	100	91		1	91	60-140	07/18/2015 0647
Carbon disulfide	ND	50	60		1	120	60-140	07/18/2015 0647
Carbon tetrachloride	ND	50	55		1	111	37-166	07/18/2015 0647
Chlorobenzene	ND	50	55		1	110	78-129	07/18/2015 0647
Chloroethane	ND	50	38		1	76	60-140	07/18/2015 0647
Chloroform	6.1	50	53		1	93	63-123	07/18/2015 0647
Chloromethane (Methyl chloride)	ND	50	37		1	73	20-158	07/18/2015 0647
Cyclohexane	ND	50	58		1	117	70-130	07/18/2015 0647
1,2-Dibromo-3-chloropropane (DBCP)	ND	50	48		1	96	70-130	07/18/2015 0647
Dibromochloromethane	ND	50	54		1	108	74-134	07/18/2015 0647
1,2-Dibromoethane (EDB)	ND	50	53		1	106	70-130	07/18/2015 0647
1,2-Dichlorobenzene	ND	50	54		1	108	70-130	07/18/2015 0647
1,3-Dichlorobenzene	ND	50	54		1	109	70-130	07/18/2015 0647
1,4-Dichlorobenzene	ND	50	54		1	108	70-130	07/18/2015 0647
Dichlorodifluoromethane	ND	50	33		1	66	10-158	07/18/2015 0647
1,1-Dichloroethane	ND	50	55		1	109	69-132	07/18/2015 0647
1,2-Dichloroethane	ND	50	54		1	108	70-130	07/18/2015 0647
1,1-Dichloroethene	ND	50	60		1	119	50-132	07/18/2015 0647
cis-1,2-Dichloroethene	5.6	50	55		1	98	70-130	07/18/2015 0647
trans-1,2-Dichloroethene	ND	50	57		1	115	70-130	07/18/2015 0647
1,2-Dichloropropane	ND	50	56		1	112	71-126	07/18/2015 0647
cis-1,3-Dichloropropene	ND	50	52		1	104	69-130	07/18/2015 0647
trans-1,3-Dichloropropene	ND	50	51		1	102	73-131	07/18/2015 0647
Ethylbenzene	ND	50	57		1	113	70-130	07/18/2015 0647
2-Hexanone	ND	100	98		1	98	60-140	07/18/2015 0647
Isopropylbenzene	ND	50	58		1	116	70-130	07/18/2015 0647
Methyl acetate	ND	50	45		1	89	15-128	07/18/2015 0647
Methyl tertiary butyl ether (MTBE)	ND	50	51		1	103	70-130	07/18/2015 0647
4-Methyl-2-pentanone	ND	100	100		1	104	60-140	07/18/2015 0647
Methylcyclohexane	ND	50	57		1	114	70-130	07/18/2015 0647
Methylene chloride	ND	50	53		1	106	69-129	07/18/2015 0647
Styrene	32	50	55	N	1	48	70-130	07/18/2015 0647
1,1,2,2-Tetrachloroethane	ND	50	53		1	105	60-155	07/18/2015 0647
Tetrachloroethene	0.94	50	58		1	115	70-130	07/18/2015 0647
Toluene	ND	50	58		1	116	70-130	07/18/2015 0647
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	60		1	121	70-130	07/18/2015 0647
1,2,4-Trichlorobenzene	ND	50	53		1	107	70-130	07/18/2015 0647
1,1,1-Trichloroethane	ND	50	58		1	116	77-132	07/18/2015 0647
1,1,2-Trichloroethane	0.30	50	53		1	106	77-132	07/18/2015 0647

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: QG09023-004MS

Matrix: Aqueous

Batch: 80017

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	150	50	57	N	1	-178	73-124	07/18/2015 0647
Trichlorofluoromethane	ND	50	39		1	78	60-140	07/18/2015 0647
Vinyl chloride	ND	50	40		1	80	29-159	07/18/2015 0647
Xylenes (total)	ND	100	110		1	111	70-130	07/18/2015 0647
Surrogate	Q	% Rec	Acceptance Limit					
1,2-Dichloroethane-d4		88	70-130					
Bromofluorobenzene		118	70-130					
Toluene-d8		103	70-130					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: QG09023-004MD

Matrix: Aqueous

Batch: 80017

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	21	100	77	N,+	1	57	23	60-140	20	07/18/2015 0709
Benzene	ND	50	46	+	1	91	21	70-130	20	07/18/2015 0709
Bromodichloromethane	ND	50	43	+	1	86	24	71-143	20	07/18/2015 0709
Bromoform	ND	50	40	+	1	80	25	65-131	20	07/18/2015 0709
Bromomethane (Methyl bromide)	ND	50	43		1	86	11	36-168	20	07/18/2015 0709
2-Butanone (MEK)	ND	100	74	+	1	74	21	60-140	20	07/18/2015 0709
Carbon disulfide	ND	50	49		1	98	20	60-140	20	07/18/2015 0709
Carbon tetrachloride	ND	50	45	+	1	90	21	37-166	20	07/18/2015 0709
Chlorobenzene	ND	50	44	+	1	88	22	78-129	20	07/18/2015 0709
Chloroethane	ND	50	44		1	87	14	60-140	20	07/18/2015 0709
Chloroform	6.1	50	43	+	1	73	21	63-123	20	07/18/2015 0709
Chloromethane (Methyl chloride)	ND	50	42		1	83	12	20-158	20	07/18/2015 0709
Cyclohexane	ND	50	47	+	1	94	21	70-130	20	07/18/2015 0709
1,2-Dibromo-3-chloropropane (DBCP)	ND	50	37	+	1	73	27	70-130	20	07/18/2015 0709
Dibromochloromethane	ND	50	42	+	1	84	24	74-134	20	07/18/2015 0709
1,2-Dibromoethane (EDB)	ND	50	41	+	1	83	24	70-130	20	07/18/2015 0709
1,2-Dichlorobenzene	ND	50	42	+	1	84	25	70-130	20	07/18/2015 0709
1,3-Dichlorobenzene	ND	50	42	+	1	85	25	70-130	20	07/18/2015 0709
1,4-Dichlorobenzene	ND	50	42	+	1	84	25	70-130	20	07/18/2015 0709
Dichlorodifluoromethane	ND	50	36		1	72	8.8	10-158	20	07/18/2015 0709
1,1-Dichloroethane	ND	50	45		1	89	20	69-132	20	07/18/2015 0709
1,2-Dichloroethane	ND	50	43	+	1	85	23	70-130	20	07/18/2015 0709
1,1-Dichloroethene	ND	50	48	+	1	97	21	50-132	20	07/18/2015 0709
cis-1,2-Dichloroethene	5.6	50	45	+	1	78	21	70-130	20	07/18/2015 0709
trans-1,2-Dichloroethene	ND	50	46	+	1	92	22	70-130	20	07/18/2015 0709
1,2-Dichloropropane	ND	50	44	+	1	88	24	71-126	20	07/18/2015 0709
cis-1,3-Dichloropropene	ND	50	41	+	1	82	23	69-130	20	07/18/2015 0709
trans-1,3-Dichloropropene	ND	50	40	+	1	79	25	73-131	20	07/18/2015 0709
Ethylbenzene	ND	50	46	+	1	91	22	70-130	20	07/18/2015 0709
2-Hexanone	ND	100	76	+	1	76	26	60-140	20	07/18/2015 0709
Isopropylbenzene	ND	50	45	+	1	91	24	70-130	20	07/18/2015 0709
Methyl acetate	ND	50	35	+	1	69	25	15-128	20	07/18/2015 0709
Methyl tertiary butyl ether (MTBE)	ND	50	40	+	1	80	25	70-130	20	07/18/2015 0709
4-Methyl-2-pentanone	ND	100	80	+	1	80	26	60-140	20	07/18/2015 0709
Methylcyclohexane	ND	50	46	+	1	92	21	70-130	20	07/18/2015 0709
Methylene chloride	ND	50	43		1	87	20	69-129	20	07/18/2015 0709
Styrene	32	50	44	N,+	1	25	22	70-130	20	07/18/2015 0709
1,1,2,2-Tetrachloroethane	ND	50	41	+	1	82	25	60-155	20	07/18/2015 0709
Tetrachloroethene	0.94	50	47	+	1	92	22	70-130	20	07/18/2015 0709
Toluene	ND	50	46	+	1	92	22	70-130	20	07/18/2015 0709
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	49	+	1	97	22	70-130	20	07/18/2015 0709
1,2,4-Trichlorobenzene	ND	50	43	+	1	86	21	70-130	20	07/18/2015 0709
1,1,1-Trichloroethane	ND	50	46	+	1	93	22	77-132	20	07/18/2015 0709
1,1,2-Trichloroethane	0.30	50	42	+	1	84	23	77-132	20	07/18/2015 0709

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: QG09023-004MD

Matrix: Aqueous

Batch: 80017

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
Trichloroethene	150	50	46	N,+	1	-199	21	73-124	20	07/18/2015 0709	
Trichlorofluoromethane	ND	50	44		1	87	11	60-140	20	07/18/2015 0709	
Vinyl chloride	ND	50	45		1	90	11	29-159	20	07/18/2015 0709	
Xylenes (total)	ND	100	89	+	1	89	22	70-130	20	07/18/2015 0709	
Surrogate	Q	% Rec	Acceptance Limit								
1,2-Dichloroethane-d4		87	70-130								
Bromofluorobenzene		114	70-130								
Toluene-d8		101	70-130								

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

SHEALY ENVIRONMENTAL SERVICES, INC.

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 50356

Chain of Custody Record

Client AECOM	Report to Contract Scott Ross	Telephone No. / Email 803 201 9662 Scott.Ross@AECOM.COM	Quote No.
Address 101 Research Dr		Analysis (Attach list if more spaces is needed)	
City Columbia	State SC	Page 1 of 1	
Zip Code 29203	 QG09023		
Project Name Spikespear			
Project No.	Remarks / Cooler I.D.		

Sample ID / Description <small>(Containers for each sample may be combined on one line.)</small>	Date	Time	Metric						No. of Containers by Preservative Type	Possible Hazard Identification	OC Requirements (Specify)								
			Asst	Lead	PCB	PCB	PCB	PCB			Asst	Lead	Date	Time					
TMW-25	7-8-15	1515	G	✓					3										
TMW-31	7-9-15	0905	G	✓					3										
TMW-23		1015	G	✓					3										
TMW-30		1055	G	✓					3										
TMW-22		1138	G	✓					3										
TMW-21		1230	G	✓					3										
TMW-33		1320	G	✓					3										
Trap Blank				✓					2										

Turn Around Time Required (Prior lab approval required for expedited IAT)	Sample Disposal	Return to Client	Disposal by Lab	Possible Hazard Identification
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)	<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab	<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown		
1. Relinquished by J. H. DeFoeant	Date 7-9-15 Time 1450	1. Received by		
2. Relinquished by	Date	2. Received by		
3. Relinquished by	Date	3. Received by		
4. Relinquished by	Date	4. Laboratory received by James DeFoeant		

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
 Received on ice (Circle) Yes No Ice Pack Receipt Temp. **11-9** °C

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
 Document Number: F-AD-016
 Revision Number: 17

Page 1 of 1
 Replaces Date: 11/07/14
 Effective Date: 04/30/15

Sample Receipt Checklist (SRC)

Client: Aecom Cooler Inspected by/date: DWP 7-9-15 Lot #: Q609023

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		1. Were custody seals present on the cooler?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>		2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>11.9/11.8</u> °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>S</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>		3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>		4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>		5a. Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		16. Were any samples containers missing?
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>		18. Were bubbles present >"pca-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>		19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>		20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>		21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>		22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>		23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		24. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>DWP</u> Verified by: _____ Date: <u>7-9-15</u>		

Comments:

Report of Analysis

AECOM

4016 Salt Pointe Parkway
North Charleston, SC 29405
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **60328308.11**

Lot Number: **QH04060**

Date Completed: **08/10/2015**

Date Revised: **08/25/2015**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: QH04060

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Report Revision 08/25/2015

This report is revised to update the Project number.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: QH04060

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-2D	Aqueous	08/03/2015 1635	08/04/2015
002	RDW-2	Aqueous	08/04/2015 1200	08/04/2015

(2 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: QH04060

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
002	RDW-2	Aqueous	Acetone	8260B	5.0	J	ug/L	7

(1 detection)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH04060-001
Description: MW-2D	Matrix: Aqueous
Date Sampled: 08/03/2015 1635	
Date Received: 08/04/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/09/2015 1503	JJG		81895

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH04060-001
Description: MW-2D	Matrix: Aqueous
Date Sampled: 08/03/2015 1635	
Date Received: 08/04/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/09/2015 1503	JJG		81895

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		95	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH04060-002
Description: RDW-2	Matrix: Aqueous
Date Sampled: 08/04/2015 1200	
Date Received: 08/04/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/09/2015 1525	JJG		81895

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	5.0	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH04060-002
Description: RDW-2	Matrix: Aqueous
Date Sampled: 08/04/2015 1200	
Date Received: 08/04/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/09/2015 1525	JJG		81895

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		92	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ81895-001

Matrix: Aqueous

Batch: 81895

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	08/09/2015 1250
Benzene	ND		1	5.0	0.21	ug/L	08/09/2015 1250
Bromodichloromethane	ND		1	5.0	0.23	ug/L	08/09/2015 1250
Bromoform	ND		1	5.0	0.35	ug/L	08/09/2015 1250
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	08/09/2015 1250
2-Butanone (MEK)	ND		1	10	1.8	ug/L	08/09/2015 1250
Carbon disulfide	ND		1	5.0	0.45	ug/L	08/09/2015 1250
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	08/09/2015 1250
Chlorobenzene	ND		1	5.0	0.20	ug/L	08/09/2015 1250
Chloroethane	ND		1	5.0	0.28	ug/L	08/09/2015 1250
Chloroform	ND		1	5.0	0.21	ug/L	08/09/2015 1250
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	08/09/2015 1250
Cyclohexane	ND		1	5.0	0.30	ug/L	08/09/2015 1250
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	08/09/2015 1250
Dibromochloromethane	ND		1	5.0	0.23	ug/L	08/09/2015 1250
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	08/09/2015 1250
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	08/09/2015 1250
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	08/09/2015 1250
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	08/09/2015 1250
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	08/09/2015 1250
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	08/09/2015 1250
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	08/09/2015 1250
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	08/09/2015 1250
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	08/09/2015 1250
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	08/09/2015 1250
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	08/09/2015 1250
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	08/09/2015 1250
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	08/09/2015 1250
Ethylbenzene	ND		1	5.0	0.21	ug/L	08/09/2015 1250
2-Hexanone	ND		1	10	0.26	ug/L	08/09/2015 1250
Isopropylbenzene	ND		1	5.0	0.14	ug/L	08/09/2015 1250
Methyl acetate	ND		1	5.0	0.24	ug/L	08/09/2015 1250
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	08/09/2015 1250
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	08/09/2015 1250
Methylcyclohexane	ND		1	5.0	0.16	ug/L	08/09/2015 1250
Methylene chloride	ND		1	5.0	0.42	ug/L	08/09/2015 1250
Styrene	ND		1	5.0	0.13	ug/L	08/09/2015 1250
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	08/09/2015 1250
Tetrachloroethene	ND		1	5.0	0.22	ug/L	08/09/2015 1250
Toluene	ND		1	5.0	0.24	ug/L	08/09/2015 1250
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	08/09/2015 1250
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	08/09/2015 1250
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	08/09/2015 1250
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	08/09/2015 1250

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ81895-001

Matrix: Aqueous

Batch: 81895

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	08/09/2015 1250
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	08/09/2015 1250
Vinyl chloride	ND		1	2.0	0.50	ug/L	08/09/2015 1250
Xylenes (total)	ND		1	5.0	0.32	ug/L	08/09/2015 1250
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		99	70-130				
1,2-Dichloroethane-d4		94	70-130				
Toluene-d8		94	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ81895-002

Matrix: Aqueous

Batch: 81895

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	93		1	93	60-140	08/09/2015 1205
Benzene	50	53		1	106	70-130	08/09/2015 1205
Bromodichloromethane	50	53		1	107	70-130	08/09/2015 1205
Bromoform	50	52		1	104	70-130	08/09/2015 1205
Bromomethane (Methyl bromide)	50	50		1	99	60-140	08/09/2015 1205
2-Butanone (MEK)	100	100		1	103	60-140	08/09/2015 1205
Carbon disulfide	50	55		1	111	60-140	08/09/2015 1205
Carbon tetrachloride	50	58		1	116	70-130	08/09/2015 1205
Chlorobenzene	50	52		1	103	70-130	08/09/2015 1205
Chloroethane	50	52		1	104	42-163	08/09/2015 1205
Chloroform	50	51		1	101	70-130	08/09/2015 1205
Chloromethane (Methyl chloride)	50	48		1	96	60-140	08/09/2015 1205
Cyclohexane	50	58		1	116	70-130	08/09/2015 1205
1,2-Dibromo-3-chloropropane (DBCP)	50	53		1	105	70-130	08/09/2015 1205
Dibromochloromethane	50	54		1	107	70-130	08/09/2015 1205
1,2-Dibromoethane (EDB)	50	53		1	106	70-130	08/09/2015 1205
1,2-Dichlorobenzene	50	52		1	104	70-130	08/09/2015 1205
1,4-Dichlorobenzene	50	52		1	103	70-130	08/09/2015 1205
1,3-Dichlorobenzene	50	52		1	104	70-130	08/09/2015 1205
Dichlorodifluoromethane	50	49		1	97	60-140	08/09/2015 1205
1,1-Dichloroethane	50	53		1	106	70-130	08/09/2015 1205
1,2-Dichloroethane	50	52		1	104	70-130	08/09/2015 1205
cis-1,2-Dichloroethene	50	53		1	106	70-130	08/09/2015 1205
1,1-Dichloroethene	50	58		1	115	70-130	08/09/2015 1205
trans-1,2-Dichloroethene	50	54		1	108	70-130	08/09/2015 1205
1,2-Dichloropropane	50	52		1	105	70-130	08/09/2015 1205
trans-1,3-Dichloropropene	50	53		1	106	70-130	08/09/2015 1205
cis-1,3-Dichloropropene	50	54		1	107	70-130	08/09/2015 1205
Ethylbenzene	50	54		1	109	70-130	08/09/2015 1205
2-Hexanone	100	100		1	105	60-140	08/09/2015 1205
Isopropylbenzene	50	55		1	109	70-130	08/09/2015 1205
Methyl acetate	50	58		1	116	60-140	08/09/2015 1205
Methyl tertiary butyl ether (MTBE)	50	53		1	105	70-130	08/09/2015 1205
4-Methyl-2-pentanone	100	110		1	107	60-140	08/09/2015 1205
Methylcyclohexane	50	60		1	120	70-130	08/09/2015 1205
Methylene chloride	50	53		1	106	70-130	08/09/2015 1205
Styrene	50	53		1	106	70-130	08/09/2015 1205
1,1,2,2-Tetrachloroethane	50	52		1	105	70-130	08/09/2015 1205
Tetrachloroethene	50	56		1	112	70-130	08/09/2015 1205
Toluene	50	53		1	105	70-130	08/09/2015 1205
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	62		1	123	70-130	08/09/2015 1205
1,2,4-Trichlorobenzene	50	54		1	107	70-130	08/09/2015 1205
1,1,2-Trichloroethane	50	52		1	104	70-130	08/09/2015 1205
1,1,1-Trichloroethane	50	55		1	109	70-130	08/09/2015 1205

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ81895-002

Matrix: Aqueous

Batch: 81895

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	55		1	110	70-130	08/09/2015 1205
Trichlorofluoromethane	50	53		1	106	70-130	08/09/2015 1205
Vinyl chloride	50	51		1	103	70-130	08/09/2015 1205
Xylenes (total)	100	110		1	107	70-130	08/09/2015 1205
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		99	70-130				
1,2-Dichloroethane-d4		96	70-130				
Toluene-d8		97	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

SHEALY ENVIRONMENTAL SERVICES, INC.



Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 49353

Client AECOM	Report to Contact SETH ROSS	Telephone No. / E-mail 803-359-1400 Scott.Ross@AECOM.com	Quote No. _____	Page 1 of 1
Address 101 Research Drive Columbia, SC 29203	Sampler's Signature Justin Butler	Analysis (Attach list if more space is needed)		
Project Name Strokecare	P.O. No. _____	Barcode: QH04060		
Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	No. of Containers By Preservation Type (None) (Ice) (Dry Ice) (VOC) (PCB) (PAH) (MMA) (K) (SOS)	Remarks / Cooler I.D.
MW-2D	8/2/15	1635	3	X
RDW-2	8/4/15	1200	3	X
Turn Around Time Required (Prior lab approval required for expedited TAT) <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)	Sample Disposal <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Dispose by Lab	Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	QC Requirements (Specify)	
1. Requisitioned by 	Date 8-4-15	Time 1645	1. Received by	Date _____
2. Requisitioned by	Date	Time	2. Received by	Date _____
3. Requisitioned by	Date	Time	3. Received by	Date _____
4. Requisitioned by	Date	Time	4. Laboratory received by 	Date 8/11/15
Note: All samples are retained for four weeks from receipt unless other arrangements are made.			LAB USE ONLY Received on ice (Circle) <input checked="" type="radio"/> Yes <input type="radio"/> No	Receipt Temp. 10.3 °C

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
 Document Number: F-AD-016
 Revision Number: 17

Page 1 of 1
 Replaces Date: 11/07/14
 Effective Date: 04/30/15

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: mam/02/04/15 Lot #: 0464060
mam 2/4/15

Means of receipt: <input checked="" type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>102/10.3°C</u> / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0.0°C</u>		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	18. Were bubbles present > "pea-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles > 6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of < 2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>mam</u> Verified by: _____ Date: <u>2/4/15</u>		

Comments:

Report of Analysis

AECOM

4016 Salt Pointe Parkway
North Charleston, SC 29405
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **60328308.11**

Lot Number: **QH04061**

Date Completed: **08/05/2015**

Date Revised: **08/25/2015**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: QH04061

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Report Revision 08/25/2015

This report is revised to update the Project number.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: QH04061

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	PW-3	Aqueous	08/04/2015 0950	08/04/2015
002	BOAZEMAN/RINGER	Aqueous	08/04/2015 1056	08/04/2015
003	PW-1	Aqueous	08/04/2015 1130	08/04/2015

(3 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: QH04061

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
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(0 detections)

QC Summary

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 49357

SHEALY Chain of Custody Record

Client AFCOM Address 101 Research Drive Columbia, SC 29203 Project Name Stake Spore	Report to Contact Scott Ross Sampler's Signature  Printed Name Justin Butler	Telephone No. / E-mail 803-254-4400 Analysis (Attach list if more space is needed) Scott.Ross@AFCOM.com (524) VOC's	Quote No. QH04061	Page 1 of 1
P.O. No.		No. of Containers by Preservative Type		
Sample ID / Description (Containers for each sample may be combined on one line.)		Matrix		
Date		Agency		
Time		Method		
P.W.-3 8/4/15 0850		6 ✓ 3		
Brassman/Banger 8/4/15 1056		6 ✓ 3		
P.W.-1 8/4/15 1130		6 ✓ 3		
Remarks / Cooler ID		Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown		
Turn Around Time Required (Prior lab approval required for expedited TAT.) <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)		Sample Disposal <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Dispose by Lab		
1. Requisitioned by A. Shephard		1. Received by Date: 8-4-15 Time: 1658		
2. Requisitioned by		2. Received by Date: Time:		
3. Requisitioned by		3. Received by Date: Time:		
4. Requisitioned by		4. Laboratory received by Date: 8/11/15 Time: 1658		
Note: All samples are retained for four weeks from receipt unless other arrangements are made.				
LAB USE ONLY Headweigh on ice (Circle) Yes No Ice Pack Reprint Temp 10.3 °C				

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
 Document Number: F-AD-016
 Revision Number: 17

Page 1 of 1
 Replaces Date: 11/07/14
 Effective Date: 04/30/15

Sample Receipt Checklist (SRC)

Client: AELcom Cooler Inspected by/date: mam/02/04/15 Lot #: 0404061
mam 2/4/15

Means of receipt: <input checked="" type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>103/103°C</u> / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0.0°C</u>		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
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Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/> 18. Were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>mam</u> Verified by: _____ Date: <u>2/4/15</u>		

Comments:

Report of Analysis

AECOM

4016 Salt Pointe Parkway
North Charleston, SC 29405
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **60328308.11**

Lot Number: **QH06108**

Date Completed: **08/13/2015**

Date Revised: **08/25/2015**



Nisreen Saikaly
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: QH06108

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

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If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Report Revision 08/25/2015

This report is revised to update the Project number.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: QH06108

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	RDW-1	Aqueous	08/05/2015 0900	08/06/2015
002	MW-3D	Aqueous	08/06/2015 0900	08/06/2015
003	MW-3DA	Aqueous	08/06/2015 0900	08/06/2015
004	MW-6D	Aqueous	08/06/2015 0930	08/06/2015
005	MW-7D	Aqueous	08/06/2015 1000	08/06/2015
006	MW-18	Aqueous	08/06/2015 1110	08/06/2015
007	MW-10	Aqueous	08/06/2015 1230	08/06/2015
008	MW-11	Aqueous	08/06/2015 1435	08/06/2015

(8 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: QH06108

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	RDW-1	Aqueous	Acetone	8260B	3.0	J	ug/L	5
001	RDW-1	Aqueous	1,1-Dichloroethane	8260B	0.38	J	ug/L	5
001	RDW-1	Aqueous	cis-1,2-Dichloroethene	8260B	3.3	J	ug/L	5
001	RDW-1	Aqueous	Tetrachloroethene	8260B	1.1	J	ug/L	5
001	RDW-1	Aqueous	Trichloroethene	8260B	180		ug/L	6
002	MW-3D	Aqueous	Chloroform	8260B	0.23	J	ug/L	7
002	MW-3D	Aqueous	cis-1,2-Dichloroethene	8260B	17		ug/L	7
002	MW-3D	Aqueous	Tetrachloroethene	8260B	1.1	J	ug/L	7
002	MW-3D	Aqueous	Trichloroethene	8260B	30		ug/L	8
003	MW-3DA	Aqueous	Bromoform	8260B	1.1	J	ug/L	9
003	MW-3DA	Aqueous	Chloroform	8260B	0.26	J	ug/L	9
003	MW-3DA	Aqueous	cis-1,2-Dichloroethene	8260B	17		ug/L	9
003	MW-3DA	Aqueous	4-Methyl-2-pentanone	8260B	0.56	J	ug/L	9
003	MW-3DA	Aqueous	Tetrachloroethene	8260B	1.1	J	ug/L	9
003	MW-3DA	Aqueous	Trichloroethene	8260B	30		ug/L	10
004	MW-6D	Aqueous	Acetone	8260B	8.8	J	ug/L	11
004	MW-6D	Aqueous	Trichloroethene	8260B	250		ug/L	12
005	MW-7D	Aqueous	cis-1,2-Dichloroethene	8260B	0.27	J	ug/L	13
005	MW-7D	Aqueous	Trichloroethene	8260B	15		ug/L	14
006	MW-18	Aqueous	Trichloroethene	8260B	7.4		ug/L	16
007	MW-10	Aqueous	Trichloroethene	8260B	830		ug/L	18

(21 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH06108-001
Description: RDW-1	Matrix: Aqueous
Date Sampled: 08/05/2015 0900	
Date Received: 08/06/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/12/2015 1503	SES		82153

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	3.0	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	0.38	J	5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	3.3	J	5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	1.1	J	5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH06108-001
Description: RDW-1	Matrix: Aqueous
Date Sampled: 08/05/2015 0900	
Date Received: 08/06/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/12/2015 1503	SES		82153

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	180		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		84	70-130
Toluene-d8		94	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH06108-002
Description: MW-3D	Matrix: Aqueous
Date Sampled: 08/06/2015 0900	
Date Received: 08/06/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/12/2015 1526	SES		82153

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	0.23	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	17		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	1.1	J	5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH06108-002
Description: MW-3D	Matrix: Aqueous
Date Sampled: 08/06/2015 0900	
Date Received: 08/06/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/12/2015 1526	SES		82153

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	30		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	70-130
Bromofluorobenzene		84	70-130
Toluene-d8		95	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH06108-003
Description: MW-3DA	Matrix: Aqueous
Date Sampled: 08/06/2015 0900	
Date Received: 08/06/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/12/2015 1550	SES		82153

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	1.1	J	5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	0.26	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	17		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	0.56	J	10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	1.1	J	5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH06108-003
Description: MW-3DA	Matrix: Aqueous
Date Sampled: 08/06/2015 0900	
Date Received: 08/06/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/12/2015 1550	SES		82153

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	30		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		87	70-130
Bromofluorobenzene		83	70-130
Toluene-d8		95	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH06108-004
Description: MW-6D	Matrix: Aqueous
Date Sampled: 08/06/2015 0930	
Date Received: 08/06/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	08/12/2015 1747	SES		82153

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	8.8	J	100	8.1	ug/L	1
Benzene	71-43-2	8260B	ND		25	1.1	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		25	1.2	ug/L	1
Bromoform	75-25-2	8260B	ND		25	1.8	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	0.95	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	9.1	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		25	2.3	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		25	1.6	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		25	1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		25	1.4	ug/L	1
Chloroform	67-66-3	8260B	ND		25	1.1	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	0.95	ug/L	1
Cyclohexane	110-82-7	8260B	ND		25	1.5	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.8	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		25	1.2	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	0.85	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.3	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	0.95	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	0.95	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		25	4.3	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		25	0.95	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		25	1.2	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		25	1.6	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		25	1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		25	1.7	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		25	1.5	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	1.5	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	1.1	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		25	1.1	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	1.3	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		25	0.70	ug/L	1
Methyl acetate	79-20-9	8260B	ND		25	1.2	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	1.2	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	1.5	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	0.80	ug/L	1
Methylene chloride	75-09-2	8260B	ND		25	2.1	ug/L	1
Styrene	100-42-5	8260B	ND		25	0.65	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	0.65	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		25	1.1	ug/L	1
Toluene	108-88-3	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	1.5	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	0.65	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	1.1	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH06108-004
Description: MW-6D	Matrix: Aqueous
Date Sampled: 08/06/2015 0930	
Date Received: 08/06/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	08/12/2015 1747	SES		82153

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	250		25	0.80	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		25	3.7	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		10	2.5	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	1.6	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	70-130
Bromofluorobenzene		83	70-130
Toluene-d8		95	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH06108-005
Description: MW-7D	Matrix: Aqueous
Date Sampled: 08/06/2015 1000	
Date Received: 08/06/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/12/2015 1613	SES		82153

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	0.27	J	5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH06108-005
Description: MW-7D	Matrix: Aqueous
Date Sampled: 08/06/2015 1000	
Date Received: 08/06/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/12/2015 1613	SES		82153

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	15		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	70-130
Bromofluorobenzene		85	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH06108-006
Description: MW-18	Matrix: Aqueous
Date Sampled: 08/06/2015 1110	
Date Received: 08/06/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/12/2015 1637	SES		82153

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH06108-006
Description: MW-18	Matrix: Aqueous
Date Sampled: 08/06/2015 1110	
Date Received: 08/06/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/12/2015 1637	SES		82153

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	7.4		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	70-130
Bromofluorobenzene		81	70-130
Toluene-d8		95	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH06108-007
Description: MW-10	Matrix: Aqueous
Date Sampled: 08/06/2015 1230	
Date Received: 08/06/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	08/12/2015 1711	SES		82199

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		100	8.1	ug/L	1
Benzene	71-43-2	8260B	ND		25	1.1	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		25	1.2	ug/L	1
Bromoform	75-25-2	8260B	ND		25	1.8	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	0.95	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	9.1	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		25	2.3	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		25	1.6	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		25	1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		25	1.4	ug/L	1
Chloroform	67-66-3	8260B	ND		25	1.1	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	0.95	ug/L	1
Cyclohexane	110-82-7	8260B	ND		25	1.5	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.8	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		25	1.2	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	0.85	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.3	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	0.95	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	0.95	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		25	4.3	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		25	0.95	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		25	1.2	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		25	1.6	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		25	1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		25	1.7	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		25	1.5	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	1.5	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	1.1	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		25	1.1	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	1.3	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		25	0.70	ug/L	1
Methyl acetate	79-20-9	8260B	ND		25	1.2	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	1.2	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	1.5	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	0.80	ug/L	1
Methylene chloride	75-09-2	8260B	ND		25	2.1	ug/L	1
Styrene	100-42-5	8260B	ND		25	0.65	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	0.65	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		25	1.1	ug/L	1
Toluene	108-88-3	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	1.5	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	0.65	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	1.1	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH06108-007
Description: MW-10	Matrix: Aqueous
Date Sampled: 08/06/2015 1230	
Date Received: 08/06/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	08/12/2015 1711	SES		82199

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	830		25	0.80	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		25	3.7	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		10	2.5	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	1.6	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		91	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH06108-008
Description: MW-11	Matrix: Aqueous
Date Sampled: 08/06/2015 1435	
Date Received: 08/06/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/12/2015 1649	SES		82199

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH06108-008
Description: MW-11	Matrix: Aqueous
Date Sampled: 08/06/2015 1435	
Date Received: 08/06/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/12/2015 1649	SES		82199

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		88	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ82153-001

Matrix: Aqueous

Batch: 82153

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	08/12/2015 0942
Benzene	ND		1	5.0	0.21	ug/L	08/12/2015 0942
Bromodichloromethane	ND		1	5.0	0.23	ug/L	08/12/2015 0942
Bromoform	ND		1	5.0	0.35	ug/L	08/12/2015 0942
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	08/12/2015 0942
2-Butanone (MEK)	ND		1	10	1.8	ug/L	08/12/2015 0942
Carbon disulfide	ND		1	5.0	0.45	ug/L	08/12/2015 0942
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	08/12/2015 0942
Chlorobenzene	ND		1	5.0	0.20	ug/L	08/12/2015 0942
Chloroethane	ND		1	5.0	0.28	ug/L	08/12/2015 0942
Chloroform	ND		1	5.0	0.21	ug/L	08/12/2015 0942
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	08/12/2015 0942
Cyclohexane	ND		1	5.0	0.30	ug/L	08/12/2015 0942
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	08/12/2015 0942
Dibromochloromethane	ND		1	5.0	0.23	ug/L	08/12/2015 0942
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	08/12/2015 0942
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	08/12/2015 0942
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	08/12/2015 0942
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	08/12/2015 0942
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	08/12/2015 0942
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	08/12/2015 0942
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	08/12/2015 0942
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	08/12/2015 0942
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	08/12/2015 0942
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	08/12/2015 0942
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	08/12/2015 0942
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	08/12/2015 0942
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	08/12/2015 0942
Ethylbenzene	ND		1	5.0	0.21	ug/L	08/12/2015 0942
2-Hexanone	ND		1	10	0.26	ug/L	08/12/2015 0942
Isopropylbenzene	ND		1	5.0	0.14	ug/L	08/12/2015 0942
Methyl acetate	ND		1	5.0	0.24	ug/L	08/12/2015 0942
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	08/12/2015 0942
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	08/12/2015 0942
Methylcyclohexane	ND		1	5.0	0.16	ug/L	08/12/2015 0942
Methylene chloride	ND		1	5.0	0.42	ug/L	08/12/2015 0942
Styrene	ND		1	5.0	0.13	ug/L	08/12/2015 0942
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	08/12/2015 0942
Tetrachloroethene	ND		1	5.0	0.22	ug/L	08/12/2015 0942
Toluene	ND		1	5.0	0.24	ug/L	08/12/2015 0942
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	08/12/2015 0942
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	08/12/2015 0942
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	08/12/2015 0942
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	08/12/2015 0942

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ82153-001

Matrix: Aqueous

Batch: 82153

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	08/12/2015 0942
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	08/12/2015 0942
Vinyl chloride	ND		1	2.0	0.50	ug/L	08/12/2015 0942
Xylenes (total)	ND		1	5.0	0.32	ug/L	08/12/2015 0942
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		84	70-130				
1,2-Dichloroethane-d4		86	70-130				
Toluene-d8		96	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ82153-002

Matrix: Aqueous

Batch: 82153

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	85		1	85	60-140	08/12/2015 0841
Benzene	50	50		1	100	70-130	08/12/2015 0841
Bromodichloromethane	50	50		1	101	70-130	08/12/2015 0841
Bromoform	50	47		1	93	70-130	08/12/2015 0841
Bromomethane (Methyl bromide)	50	55		1	111	60-140	08/12/2015 0841
2-Butanone (MEK)	100	85		1	85	60-140	08/12/2015 0841
Carbon disulfide	50	55		1	109	60-140	08/12/2015 0841
Carbon tetrachloride	50	50		1	100	70-130	08/12/2015 0841
Chlorobenzene	50	51		1	102	70-130	08/12/2015 0841
Chloroethane	50	48		1	96	42-163	08/12/2015 0841
Chloroform	50	45		1	90	70-130	08/12/2015 0841
Chloromethane (Methyl chloride)	50	46		1	92	60-140	08/12/2015 0841
Cyclohexane	50	48		1	96	70-130	08/12/2015 0841
1,2-Dibromo-3-chloropropane (DBCP)	50	40		1	79	70-130	08/12/2015 0841
Dibromochloromethane	50	48		1	97	70-130	08/12/2015 0841
1,2-Dibromoethane (EDB)	50	50		1	101	70-130	08/12/2015 0841
1,4-Dichlorobenzene	50	50		1	100	70-130	08/12/2015 0841
1,2-Dichlorobenzene	50	51		1	101	70-130	08/12/2015 0841
1,3-Dichlorobenzene	50	51		1	102	70-130	08/12/2015 0841
Dichlorodifluoromethane	50	49		1	99	60-140	08/12/2015 0841
1,2-Dichloroethane	50	49		1	97	70-130	08/12/2015 0841
1,1-Dichloroethane	50	47		1	93	70-130	08/12/2015 0841
trans-1,2-Dichloroethene	50	50		1	101	70-130	08/12/2015 0841
1,1-Dichloroethene	50	54		1	107	70-130	08/12/2015 0841
cis-1,2-Dichloroethene	50	50		1	99	70-130	08/12/2015 0841
1,2-Dichloropropane	50	49		1	98	70-130	08/12/2015 0841
trans-1,3-Dichloropropene	50	49		1	99	70-130	08/12/2015 0841
cis-1,3-Dichloropropene	50	50		1	100	70-130	08/12/2015 0841
Ethylbenzene	50	52		1	105	70-130	08/12/2015 0841
2-Hexanone	100	83		1	83	60-140	08/12/2015 0841
Isopropylbenzene	50	53		1	107	70-130	08/12/2015 0841
Methyl acetate	50	40		1	80	60-140	08/12/2015 0841
Methyl tertiary butyl ether (MTBE)	50	51		1	103	70-130	08/12/2015 0841
4-Methyl-2-pentanone	100	87		1	87	60-140	08/12/2015 0841
Methylcyclohexane	50	48		1	96	70-130	08/12/2015 0841
Methylene chloride	50	48		1	95	70-130	08/12/2015 0841
Styrene	50	52		1	104	70-130	08/12/2015 0841
1,1,2,2-Tetrachloroethane	50	48		1	95	70-130	08/12/2015 0841
Tetrachloroethene	50	50		1	100	70-130	08/12/2015 0841
Toluene	50	51		1	101	70-130	08/12/2015 0841
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	50		1	100	70-130	08/12/2015 0841
1,2,4-Trichlorobenzene	50	52		1	104	70-130	08/12/2015 0841
1,1,2-Trichloroethane	50	49		1	98	70-130	08/12/2015 0841
1,1,1-Trichloroethane	50	51		1	102	70-130	08/12/2015 0841

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ82153-002

Matrix: Aqueous

Batch: 82153

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	52		1	103	70-130	08/12/2015 0841
Trichlorofluoromethane	50	48		1	97	70-130	08/12/2015 0841
Vinyl chloride	50	50		1	100	70-130	08/12/2015 0841
Xylenes (total)	100	100		1	104	70-130	08/12/2015 0841
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		88			70-130		
1,2-Dichloroethane-d4		86			70-130		
Toluene-d8		96			70-130		

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: QH06108-004MS

Matrix: Aqueous

Batch: 82153

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	8.8	500	390		5	77	60-140	08/12/2015 1811
Benzene	ND	250	260		5	105	70-130	08/12/2015 1811
Bromodichloromethane	ND	250	250		5	100	71-143	08/12/2015 1811
Bromoform	ND	250	200		5	82	65-131	08/12/2015 1811
Bromomethane (Methyl bromide)	ND	250	310		5	125	36-168	08/12/2015 1811
2-Butanone (MEK)	ND	500	380		5	76	60-140	08/12/2015 1811
Carbon disulfide	ND	250	250		5	100	60-140	08/12/2015 1811
Carbon tetrachloride	ND	250	260		5	105	37-166	08/12/2015 1811
Chlorobenzene	ND	250	260		5	105	78-129	08/12/2015 1811
Chloroethane	ND	250	260		5	106	60-140	08/12/2015 1811
Chloroform	ND	250	240		5	95	63-123	08/12/2015 1811
Chloromethane (Methyl chloride)	ND	250	280		5	111	20-158	08/12/2015 1811
Cyclohexane	ND	250	240		5	98	70-130	08/12/2015 1811
1,2-Dibromo-3-chloropropane (DBCP)	ND	250	180		5	72	70-130	08/12/2015 1811
Dibromochloromethane	ND	250	230		5	92	74-134	08/12/2015 1811
1,2-Dibromoethane (EDB)	ND	250	250		5	100	70-130	08/12/2015 1811
1,2-Dichlorobenzene	ND	250	250		5	101	70-130	08/12/2015 1811
1,3-Dichlorobenzene	ND	250	250		5	102	70-130	08/12/2015 1811
1,4-Dichlorobenzene	ND	250	250		5	99	70-130	08/12/2015 1811
Dichlorodifluoromethane	ND	250	270		5	106	10-158	08/12/2015 1811
1,1-Dichloroethane	ND	250	250		5	100	69-132	08/12/2015 1811
1,2-Dichloroethane	ND	250	250		5	101	70-130	08/12/2015 1811
1,1-Dichloroethene	ND	250	280		5	110	50-132	08/12/2015 1811
cis-1,2-Dichloroethene	ND	250	250		5	101	70-130	08/12/2015 1811
trans-1,2-Dichloroethene	ND	250	260		5	106	70-130	08/12/2015 1811
1,2-Dichloropropane	ND	250	260		5	102	71-126	08/12/2015 1811
cis-1,3-Dichloropropene	ND	250	240		5	97	69-130	08/12/2015 1811
trans-1,3-Dichloropropene	ND	250	240		5	95	73-131	08/12/2015 1811
Ethylbenzene	ND	250	260		5	106	70-130	08/12/2015 1811
2-Hexanone	ND	500	390		5	79	60-140	08/12/2015 1811
Isopropylbenzene	ND	250	270		5	107	70-130	08/12/2015 1811
Methyl acetate	ND	250	190		5	76	15-128	08/12/2015 1811
Methyl tertiary butyl ether (MTBE)	ND	250	250		5	100	70-130	08/12/2015 1811
4-Methyl-2-pentanone	ND	500	420		5	84	60-140	08/12/2015 1811
Methylcyclohexane	ND	250	240		5	95	70-130	08/12/2015 1811
Methylene chloride	ND	250	250		5	98	69-129	08/12/2015 1811
Styrene	ND	250	260		5	105	70-130	08/12/2015 1811
1,1,2,2-Tetrachloroethane	ND	250	230		5	92	60-155	08/12/2015 1811
Tetrachloroethene	ND	250	250		5	101	70-130	08/12/2015 1811
Toluene	ND	250	260		5	105	70-130	08/12/2015 1811
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	250	250		5	99	70-130	08/12/2015 1811
1,2,4-Trichlorobenzene	ND	250	260		5	103	70-130	08/12/2015 1811
1,1,1-Trichloroethane	ND	250	270		5	108	77-132	08/12/2015 1811
1,1,2-Trichloroethane	ND	250	250		5	101	77-132	08/12/2015 1811

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: QH06108-004MS

Matrix: Aqueous

Batch: 82153

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	250	250	510		5	105	73-124	08/12/2015 1811
Trichlorofluoromethane	ND	250	270		5	106	60-140	08/12/2015 1811
Vinyl chloride	ND	250	300		5	118	29-159	08/12/2015 1811
Xylenes (total)	ND	500	530		5	105	70-130	08/12/2015 1811
Surrogate	Q	% Rec	Acceptance Limit					
1,2-Dichloroethane-d4		87	70-130					
Bromofluorobenzene		87	70-130					
Toluene-d8		96	70-130					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: QH06108-004MD

Matrix: Aqueous

Batch: 82153

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	8.8	500	400		5	78	2.0	60-140	20	08/12/2015 1835
Benzene	ND	250	270		5	109	3.5	70-130	20	08/12/2015 1835
Bromodichloromethane	ND	250	260		5	105	4.7	71-143	20	08/12/2015 1835
Bromoform	ND	250	210		5	84	2.4	65-131	20	08/12/2015 1835
Bromomethane (Methyl bromide)	ND	250	310		5	122	2.5	36-168	20	08/12/2015 1835
2-Butanone (MEK)	ND	500	400		5	81	6.3	60-140	20	08/12/2015 1835
Carbon disulfide	ND	250	250		5	99	0.34	60-140	20	08/12/2015 1835
Carbon tetrachloride	ND	250	260		5	103	1.6	37-166	20	08/12/2015 1835
Chlorobenzene	ND	250	260		5	102	3.1	78-129	20	08/12/2015 1835
Chloroethane	ND	250	260		5	106	0.033	60-140	20	08/12/2015 1835
Chloroform	ND	250	240		5	97	2.6	63-123	20	08/12/2015 1835
Chloromethane (Methyl chloride)	ND	250	270		5	109	1.9	20-158	20	08/12/2015 1835
Cyclohexane	ND	250	230		5	90	8.3	70-130	20	08/12/2015 1835
1,2-Dibromo-3-chloropropane (DBCP)	ND	250	190		5	74	2.3	70-130	20	08/12/2015 1835
Dibromochloromethane	ND	250	240		5	94	1.8	74-134	20	08/12/2015 1835
1,2-Dibromoethane (EDB)	ND	250	260		5	103	2.3	70-130	20	08/12/2015 1835
1,2-Dichlorobenzene	ND	250	260		5	103	2.0	70-130	20	08/12/2015 1835
1,3-Dichlorobenzene	ND	250	250		5	102	0.059	70-130	20	08/12/2015 1835
1,4-Dichlorobenzene	ND	250	250		5	99	0.11	70-130	20	08/12/2015 1835
Dichlorodifluoromethane	ND	250	250		5	99	6.9	10-158	20	08/12/2015 1835
1,1-Dichloroethane	ND	250	250		5	101	0.95	69-132	20	08/12/2015 1835
1,2-Dichloroethane	ND	250	260		5	103	2.4	70-130	20	08/12/2015 1835
1,1-Dichloroethene	ND	250	280		5	111	0.77	50-132	20	08/12/2015 1835
cis-1,2-Dichloroethene	ND	250	260		5	105	4.1	70-130	20	08/12/2015 1835
trans-1,2-Dichloroethene	ND	250	270		5	108	1.9	70-130	20	08/12/2015 1835
1,2-Dichloropropane	ND	250	270		5	106	3.8	71-126	20	08/12/2015 1835
cis-1,3-Dichloropropene	ND	250	250		5	100	2.8	69-130	20	08/12/2015 1835
trans-1,3-Dichloropropene	ND	250	240		5	97	1.9	73-131	20	08/12/2015 1835
Ethylbenzene	ND	250	250		5	102	3.7	70-130	20	08/12/2015 1835
2-Hexanone	ND	500	400		5	81	2.1	60-140	20	08/12/2015 1835
Isopropylbenzene	ND	250	260		5	104	3.0	70-130	20	08/12/2015 1835
Methyl acetate	ND	250	190		5	77	1.9	15-128	20	08/12/2015 1835
Methyl tertiary butyl ether (MTBE)	ND	250	260		5	104	3.3	70-130	20	08/12/2015 1835
4-Methyl-2-pentanone	ND	500	440		5	88	4.9	60-140	20	08/12/2015 1835
Methylcyclohexane	ND	250	230		5	91	4.2	70-130	20	08/12/2015 1835
Methylene chloride	ND	250	250		5	101	3.2	69-129	20	08/12/2015 1835
Styrene	ND	250	260		5	105	0.21	70-130	20	08/12/2015 1835
1,1,2,2-Tetrachloroethane	ND	250	240		5	97	5.3	60-155	20	08/12/2015 1835
Tetrachloroethene	ND	250	240		5	97	4.3	70-130	20	08/12/2015 1835
Toluene	ND	250	260		5	104	1.1	70-130	20	08/12/2015 1835
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	250	240		5	95	3.6	70-130	20	08/12/2015 1835
1,2,4-Trichlorobenzene	ND	250	260		5	103	0.83	70-130	20	08/12/2015 1835
1,1,1-Trichloroethane	ND	250	270		5	109	0.77	77-132	20	08/12/2015 1835
1,1,2-Trichloroethane	ND	250	260		5	103	1.7	77-132	20	08/12/2015 1835

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: QH06108-004MD

Matrix: Aqueous

Batch: 82153

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	250	250	510		5	105	0.21	73-124	20	08/12/2015 1835
Trichlorofluoromethane	ND	250	250		5	101	5.0	60-140	20	08/12/2015 1835
Vinyl chloride	ND	250	300		5	118	0.032	29-159	20	08/12/2015 1835
Xylenes (total)	ND	500	510		5	103	2.6	70-130	20	08/12/2015 1835

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		87	70-130
Bromofluorobenzene		85	70-130
Toluene-d8		94	70-130

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ82199-001

Matrix: Aqueous

Batch: 82199

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	08/12/2015 1056
Benzene	ND		1	5.0	0.21	ug/L	08/12/2015 1056
Bromodichloromethane	ND		1	5.0	0.23	ug/L	08/12/2015 1056
Bromoform	ND		1	5.0	0.35	ug/L	08/12/2015 1056
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	08/12/2015 1056
2-Butanone (MEK)	ND		1	10	1.8	ug/L	08/12/2015 1056
Carbon disulfide	ND		1	5.0	0.45	ug/L	08/12/2015 1056
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	08/12/2015 1056
Chlorobenzene	ND		1	5.0	0.20	ug/L	08/12/2015 1056
Chloroethane	ND		1	5.0	0.28	ug/L	08/12/2015 1056
Chloroform	ND		1	5.0	0.21	ug/L	08/12/2015 1056
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	08/12/2015 1056
Cyclohexane	ND		1	5.0	0.30	ug/L	08/12/2015 1056
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	08/12/2015 1056
Dibromochloromethane	ND		1	5.0	0.23	ug/L	08/12/2015 1056
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	08/12/2015 1056
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	08/12/2015 1056
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	08/12/2015 1056
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	08/12/2015 1056
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	08/12/2015 1056
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	08/12/2015 1056
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	08/12/2015 1056
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	08/12/2015 1056
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	08/12/2015 1056
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	08/12/2015 1056
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	08/12/2015 1056
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	08/12/2015 1056
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	08/12/2015 1056
Ethylbenzene	ND		1	5.0	0.21	ug/L	08/12/2015 1056
2-Hexanone	ND		1	10	0.26	ug/L	08/12/2015 1056
Isopropylbenzene	ND		1	5.0	0.14	ug/L	08/12/2015 1056
Methyl acetate	ND		1	5.0	0.24	ug/L	08/12/2015 1056
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	08/12/2015 1056
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	08/12/2015 1056
Methylcyclohexane	ND		1	5.0	0.16	ug/L	08/12/2015 1056
Methylene chloride	ND		1	5.0	0.42	ug/L	08/12/2015 1056
Styrene	ND		1	5.0	0.13	ug/L	08/12/2015 1056
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	08/12/2015 1056
Tetrachloroethene	ND		1	5.0	0.22	ug/L	08/12/2015 1056
Toluene	ND		1	5.0	0.24	ug/L	08/12/2015 1056
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	08/12/2015 1056
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	08/12/2015 1056
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	08/12/2015 1056
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	08/12/2015 1056

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ82199-001

Matrix: Aqueous

Batch: 82199

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	08/12/2015 1056
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	08/12/2015 1056
Vinyl chloride	ND		1	2.0	0.50	ug/L	08/12/2015 1056
Xylenes (total)	ND		1	5.0	0.32	ug/L	08/12/2015 1056
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		98	70-130				
1,2-Dichloroethane-d4		84	70-130				
Toluene-d8		91	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ82199-002

Matrix: Aqueous

Batch: 82199

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	73		1	73	60-140	08/12/2015 0957
Benzene	50	48		1	96	70-130	08/12/2015 0957
Bromodichloromethane	50	48		1	97	70-130	08/12/2015 0957
Bromoform	50	50		1	100	70-130	08/12/2015 0957
Bromomethane (Methyl bromide)	50	48		1	96	60-140	08/12/2015 0957
2-Butanone (MEK)	100	88		1	88	60-140	08/12/2015 0957
Carbon disulfide	50	46		1	92	60-140	08/12/2015 0957
Carbon tetrachloride	50	51		1	101	70-130	08/12/2015 0957
Chlorobenzene	50	50		1	100	70-130	08/12/2015 0957
Chloroethane	50	48		1	96	42-163	08/12/2015 0957
Chloroform	50	44		1	87	70-130	08/12/2015 0957
Chloromethane (Methyl chloride)	50	44		1	88	60-140	08/12/2015 0957
Cyclohexane	50	48		1	95	70-130	08/12/2015 0957
1,2-Dibromo-3-chloropropane (DBCP)	50	49		1	99	70-130	08/12/2015 0957
Dibromochloromethane	50	52		1	104	70-130	08/12/2015 0957
1,2-Dibromoethane (EDB)	50	51		1	103	70-130	08/12/2015 0957
1,3-Dichlorobenzene	50	51		1	102	70-130	08/12/2015 0957
1,2-Dichlorobenzene	50	51		1	103	70-130	08/12/2015 0957
1,4-Dichlorobenzene	50	51		1	102	70-130	08/12/2015 0957
Dichlorodifluoromethane	50	51		1	102	60-140	08/12/2015 0957
1,2-Dichloroethane	50	47		1	94	70-130	08/12/2015 0957
1,1-Dichloroethane	50	45		1	90	70-130	08/12/2015 0957
1,1-Dichloroethene	50	50		1	100	70-130	08/12/2015 0957
trans-1,2-Dichloroethene	50	47		1	93	70-130	08/12/2015 0957
cis-1,2-Dichloroethene	50	46		1	91	70-130	08/12/2015 0957
1,2-Dichloropropane	50	47		1	94	70-130	08/12/2015 0957
trans-1,3-Dichloropropene	50	50		1	100	70-130	08/12/2015 0957
cis-1,3-Dichloropropene	50	48		1	96	70-130	08/12/2015 0957
Ethylbenzene	50	52		1	104	70-130	08/12/2015 0957
2-Hexanone	100	99		1	99	60-140	08/12/2015 0957
Isopropylbenzene	50	53		1	106	70-130	08/12/2015 0957
Methyl acetate	50	49		1	98	60-140	08/12/2015 0957
Methyl tertiary butyl ether (MTBE)	50	45		1	89	70-130	08/12/2015 0957
4-Methyl-2-pentanone	100	95		1	95	60-140	08/12/2015 0957
Methylcyclohexane	50	54		1	107	70-130	08/12/2015 0957
Methylene chloride	50	45		1	91	70-130	08/12/2015 0957
Styrene	50	51		1	103	70-130	08/12/2015 0957
1,1,2,2-Tetrachloroethane	50	49		1	99	70-130	08/12/2015 0957
Tetrachloroethene	50	55		1	111	70-130	08/12/2015 0957
Toluene	50	51		1	101	70-130	08/12/2015 0957
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	54		1	108	70-130	08/12/2015 0957
1,2,4-Trichlorobenzene	50	53		1	106	70-130	08/12/2015 0957
1,1,2-Trichloroethane	50	50		1	100	70-130	08/12/2015 0957
1,1,1-Trichloroethane	50	46		1	93	70-130	08/12/2015 0957

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ82199-002

Matrix: Aqueous

Batch: 82199

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	50		1	101	70-130	08/12/2015 0957
Trichlorofluoromethane	50	50		1	100	70-130	08/12/2015 0957
Vinyl chloride	50	47		1	93	70-130	08/12/2015 0957
Xylenes (total)	100	100		1	102	70-130	08/12/2015 0957
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		97	70-130				
1,2-Dichloroethane-d4		82	70-130				
Toluene-d8		91	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: QH06108-007MS

Matrix: Aqueous

Batch: 82199

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	ND	500	340		5	69	60-140	08/12/2015 1734
Benzene	ND	250	240		5	95	70-130	08/12/2015 1734
Bromodichloromethane	ND	250	230		5	90	71-143	08/12/2015 1734
Bromoform	ND	250	190		5	76	65-131	08/12/2015 1734
Bromomethane (Methyl bromide)	ND	250	250		5	98	36-168	08/12/2015 1734
2-Butanone (MEK)	ND	500	390		5	79	60-140	08/12/2015 1734
Carbon disulfide	ND	250	200		5	80	60-140	08/12/2015 1734
Carbon tetrachloride	ND	250	260		5	106	37-166	08/12/2015 1734
Chlorobenzene	ND	250	230		5	91	78-129	08/12/2015 1734
Chloroethane	ND	250	250		5	100	60-140	08/12/2015 1734
Chloroform	ND	250	230		5	92	63-123	08/12/2015 1734
Chloromethane (Methyl chloride)	ND	250	240		5	97	20-158	08/12/2015 1734
Cyclohexane	ND	250	240		5	97	70-130	08/12/2015 1734
1,2-Dibromo-3-chloropropane (DBCP)	ND	250	200		5	78	70-130	08/12/2015 1734
Dibromochloromethane	ND	250	210		5	85	74-134	08/12/2015 1734
1,2-Dibromoethane (EDB)	ND	250	220		5	89	70-130	08/12/2015 1734
1,2-Dichlorobenzene	ND	250	220		5	89	70-130	08/12/2015 1734
1,3-Dichlorobenzene	ND	250	220		5	90	70-130	08/12/2015 1734
1,4-Dichlorobenzene	ND	250	220		5	89	70-130	08/12/2015 1734
Dichlorodifluoromethane	ND	250	270		5	107	10-158	08/12/2015 1734
1,1-Dichloroethane	ND	250	230		5	93	69-132	08/12/2015 1734
1,2-Dichloroethane	ND	250	230		5	91	70-130	08/12/2015 1734
1,1-Dichloroethene	ND	250	250		5	102	50-132	08/12/2015 1734
cis-1,2-Dichloroethene	ND	250	230		5	94	70-130	08/12/2015 1734
trans-1,2-Dichloroethene	ND	250	250		5	99	70-130	08/12/2015 1734
1,2-Dichloropropane	ND	250	230		5	91	71-126	08/12/2015 1734
cis-1,3-Dichloropropene	ND	250	220		5	87	69-130	08/12/2015 1734
trans-1,3-Dichloropropene	ND	250	210		5	84	73-131	08/12/2015 1734
Ethylbenzene	ND	250	240		5	94	70-130	08/12/2015 1734
2-Hexanone	ND	500	400		5	81	60-140	08/12/2015 1734
Isopropylbenzene	ND	250	230		5	94	70-130	08/12/2015 1734
Methyl acetate	ND	250	220		5	88	15-128	08/12/2015 1734
Methyl tertiary butyl ether (MTBE)	ND	250	220		5	87	70-130	08/12/2015 1734
4-Methyl-2-pentanone	ND	500	420		5	84	60-140	08/12/2015 1734
Methylcyclohexane	ND	250	260		5	102	70-130	08/12/2015 1734
Methylene chloride	ND	250	230		5	93	69-129	08/12/2015 1734
Styrene	ND	250	220		5	90	70-130	08/12/2015 1734
1,1,2,2-Tetrachloroethane	ND	250	220		5	87	60-155	08/12/2015 1734
Tetrachloroethene	ND	250	250		5	102	70-130	08/12/2015 1734
Toluene	ND	250	230		5	92	70-130	08/12/2015 1734
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	250	270		5	107	70-130	08/12/2015 1734
1,2,4-Trichlorobenzene	ND	250	210		5	85	70-130	08/12/2015 1734
1,1,1-Trichloroethane	ND	250	250		5	99	77-132	08/12/2015 1734
1,1,2-Trichloroethane	ND	250	220		5	89	77-132	08/12/2015 1734

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: QH06108-007MS

Matrix: Aqueous

Batch: 82199

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	830	250	1100	E	5	90	73-124	08/12/2015 1734
Trichlorofluoromethane	ND	250	260		5	104	60-140	08/12/2015 1734
Vinyl chloride	ND	250	260		5	103	29-159	08/12/2015 1734
Xylenes (total)	ND	500	460		5	92	70-130	08/12/2015 1734
Surrogate	Q	% Rec	Acceptance Limit					
1,2-Dichloroethane-d4		87	70-130					
Bromofluorobenzene		99	70-130					
Toluene-d8		90	70-130					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: QH06108-007MD

Matrix: Aqueous

Batch: 82199

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	ND	500	380		5	76	9.5	60-140	20	08/12/2015 1756
Benzene	ND	250	260		5	102	7.3	70-130	20	08/12/2015 1756
Bromodichloromethane	ND	250	250		5	99	9.7	71-143	20	08/12/2015 1756
Bromoform	ND	250	210		5	85	10	65-131	20	08/12/2015 1756
Bromomethane (Methyl bromide)	ND	250	280		5	111	13	36-168	20	08/12/2015 1756
2-Butanone (MEK)	ND	500	440		5	88	11	60-140	20	08/12/2015 1756
Carbon disulfide	ND	250	220		5	87	8.6	60-140	20	08/12/2015 1756
Carbon tetrachloride	ND	250	280		5	112	5.2	37-166	20	08/12/2015 1756
Chlorobenzene	ND	250	240		5	98	7.1	78-129	20	08/12/2015 1756
Chloroethane	ND	250	290		5	114	13	60-140	20	08/12/2015 1756
Chloroform	ND	250	250		5	98	7.0	63-123	20	08/12/2015 1756
Chloromethane (Methyl chloride)	ND	250	280		5	111	13	20-158	20	08/12/2015 1756
Cyclohexane	ND	250	260		5	103	5.4	70-130	20	08/12/2015 1756
1,2-Dibromo-3-chloropropane (DBCP)	ND	250	220		5	89	13	70-130	20	08/12/2015 1756
Dibromochloromethane	ND	250	240		5	94	10	74-134	20	08/12/2015 1756
1,2-Dibromoethane (EDB)	ND	250	240		5	96	7.2	70-130	20	08/12/2015 1756
1,2-Dichlorobenzene	ND	250	240		5	97	9.2	70-130	20	08/12/2015 1756
1,3-Dichlorobenzene	ND	250	240		5	96	6.2	70-130	20	08/12/2015 1756
1,4-Dichlorobenzene	ND	250	240		5	95	6.7	70-130	20	08/12/2015 1756
Dichlorodifluoromethane	ND	250	300		5	121	12	10-158	20	08/12/2015 1756
1,1-Dichloroethane	ND	250	250		5	101	7.8	69-132	20	08/12/2015 1756
1,2-Dichloroethane	ND	250	250		5	99	8.5	70-130	20	08/12/2015 1756
1,1-Dichloroethene	ND	250	280		5	110	7.8	50-132	20	08/12/2015 1756
cis-1,2-Dichloroethene	ND	250	250		5	102	8.3	70-130	20	08/12/2015 1756
trans-1,2-Dichloroethene	ND	250	260		5	104	5.4	70-130	20	08/12/2015 1756
1,2-Dichloropropane	ND	250	250		5	99	8.6	71-126	20	08/12/2015 1756
cis-1,3-Dichloropropene	ND	250	240		5	95	8.4	69-130	20	08/12/2015 1756
trans-1,3-Dichloropropene	ND	250	230		5	91	8.1	73-131	20	08/12/2015 1756
Ethylbenzene	ND	250	250		5	102	7.6	70-130	20	08/12/2015 1756
2-Hexanone	ND	500	430		5	87	7.1	60-140	20	08/12/2015 1756
Isopropylbenzene	ND	250	250		5	101	7.8	70-130	20	08/12/2015 1756
Methyl acetate	ND	250	240		5	96	8.7	15-128	20	08/12/2015 1756
Methyl tertiary butyl ether (MTBE)	ND	250	240		5	96	9.6	70-130	20	08/12/2015 1756
4-Methyl-2-pentanone	ND	500	460		5	92	9.9	60-140	20	08/12/2015 1756
Methylcyclohexane	ND	250	270		5	107	4.5	70-130	20	08/12/2015 1756
Methylene chloride	ND	250	250		5	99	6.1	69-129	20	08/12/2015 1756
Styrene	ND	250	240		5	98	8.6	70-130	20	08/12/2015 1756
1,1,2,2-Tetrachloroethane	ND	250	230		5	94	7.6	60-155	20	08/12/2015 1756
Tetrachloroethene	ND	250	270		5	107	5.1	70-130	20	08/12/2015 1756
Toluene	ND	250	250		5	99	6.8	70-130	20	08/12/2015 1756
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	250	280		5	113	5.5	70-130	20	08/12/2015 1756
1,2,4-Trichlorobenzene	ND	250	240		5	97	13	70-130	20	08/12/2015 1756
1,1,1-Trichloroethane	ND	250	270		5	106	7.3	77-132	20	08/12/2015 1756
1,1,2-Trichloroethane	ND	250	240		5	97	8.8	77-132	20	08/12/2015 1756

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: QH06108-007MD

Matrix: Aqueous

Batch: 82199

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
Trichloroethene	830	250	1100	E	5	92	0.45	73-124	20	08/12/2015 1756	
Trichlorofluoromethane	ND	250	290		5	118	13	60-140	20	08/12/2015 1756	
Vinyl chloride	ND	250	300		5	119	14	29-159	20	08/12/2015 1756	
Xylenes (total)	ND	500	490		5	99	7.5	70-130	20	08/12/2015 1756	
Surrogate	Q	% Rec	Acceptance Limit								
1,2-Dichloroethane-d4		88	70-130								
Bromofluorobenzene		98	70-130								
Toluene-d8		91	70-130								

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

SHEALY ENVIRONMENTAL SERVICES, INC.

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 49354

Chain of Custody Record

Client AECOM	Report to Contact Scott Ross	Telephone No. / E-mail 803-254-4160 Scott.Ross@AECOM.com	Quote No. _____
Address 101 Research Drive	Sampler's Signature 	Analysis (Attach list if more space is needed)	Page 1 of 1
City Columbia, SC	State SC	Zip Code 29203	Barcode
Project Name Shekspere	Printed Name Justin Butler	Matrix _____	Remarks / Container I.D. _____
Project No. 60318308	P.O. No. _____	No of Containers by Preservative Type	_____
Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Matrix _____	_____
RDW-1	8/5/15	_____	_____
MW-3D	8/6/15	_____	_____
MW-3D-a	8/6/15	_____	_____
MW-6D	8/6/15	_____	_____
MW-7D	8/6/15	_____	_____
MW-18	8/6/15	_____	_____
MW-1D	8/6/15	_____	_____
MW-11	8/6/15	_____	_____

Turn Around Time Required (Prior lab approval required for expedited TAT) <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)	Sample Diagnosis <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Discard by Lab	Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	GC Requirements (Specify)
1. Relinquished by 	Date 8-6-15 1730	1. Received by	Date _____
2. Relinquished by	Date _____	2. Received by	Date _____
3. Relinquished by	Date _____	3. Received by	Date _____
4. Relinquished by	Date _____	4. Laboratory received by 	Date 8-6-15 1730

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

Received on ice (Circle) Yes No Ice Pack Receipt Temp. 4.3 °C no to

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
 Document Number: F-AD-016
 Revision Number: 17

Page 1 of 1
 Replaces Date: 11/07/14
 Effective Date: 04/30/15

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: JAG / 8/6/15 Lot #: QH06108

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>- / 4.3 / 4.3 °C</u> / / / °C / / / °C / / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/> 18. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	16934 24. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>JAG</u> Verified by: _____ Date: <u>8/6/15</u>		

Comments:

Report of Analysis

AECOM

810 Dutch Square Blvd.
Suite 202
Columbia, SC 29210
Attention: Scott Ross

Project Name: **Shakespeare**

Project Number: **60328308.11**

Lot Number: **QH10010**

Date Completed: **08/13/2015**

Date Revised: **08/25/2015**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: QH10010

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Report Revision 08/25/2015

This report is revised to update the Project number.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: QH10010

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	RIW-1 (50')	Aqueous	08/08/2015 1005	08/10/2015

(1 sample)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: QH10010

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	RIW-1 (50')	Aqueous	Chloroform	8260B	35		ug/L	5
001	RIW-1 (50')	Aqueous	Toluene	8260B	29		ug/L	6

(2 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH10010-001
Description: RIW-1 (50')	Matrix: Aqueous
Date Sampled: 08/08/2015 1005	
Date Received: 08/10/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/12/2015 1415	SES		82153

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	ug/L	1
Chloroform	67-66-3	8260B	35		5.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	ug/L	1
Toluene	108-88-3	8260B	29		5.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the PQL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH10010-001
Description: RIW-1 (50')	Matrix: Aqueous
Date Sampled: 08/08/2015 1005	
Date Received: 08/10/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/12/2015 1415	SES		82153

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	70-130
Bromofluorobenzene		85	70-130
Toluene-d8		95	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the PQL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ82153-001

Matrix: Aqueous

Batch: 82153

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	Units	Analysis Date
Acetone	ND		1	20	ug/L	08/12/2015 0942
Benzene	ND		1	5.0	ug/L	08/12/2015 0942
Bromodichloromethane	ND		1	5.0	ug/L	08/12/2015 0942
Bromoform	ND		1	5.0	ug/L	08/12/2015 0942
Bromomethane (Methyl bromide)	ND		1	5.0	ug/L	08/12/2015 0942
2-Butanone (MEK)	ND		1	10	ug/L	08/12/2015 0942
Carbon disulfide	ND		1	5.0	ug/L	08/12/2015 0942
Carbon tetrachloride	ND		1	5.0	ug/L	08/12/2015 0942
Chlorobenzene	ND		1	5.0	ug/L	08/12/2015 0942
Chloroethane	ND		1	5.0	ug/L	08/12/2015 0942
Chloroform	ND		1	5.0	ug/L	08/12/2015 0942
Chloromethane (Methyl chloride)	ND		1	5.0	ug/L	08/12/2015 0942
Cyclohexane	ND		1	5.0	ug/L	08/12/2015 0942
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	ug/L	08/12/2015 0942
Dibromochloromethane	ND		1	5.0	ug/L	08/12/2015 0942
1,2-Dibromoethane (EDB)	ND		1	5.0	ug/L	08/12/2015 0942
1,4-Dichlorobenzene	ND		1	5.0	ug/L	08/12/2015 0942
1,2-Dichlorobenzene	ND		1	5.0	ug/L	08/12/2015 0942
1,3-Dichlorobenzene	ND		1	5.0	ug/L	08/12/2015 0942
Dichlorodifluoromethane	ND		1	5.0	ug/L	08/12/2015 0942
1,2-Dichloroethane	ND		1	5.0	ug/L	08/12/2015 0942
1,1-Dichloroethane	ND		1	5.0	ug/L	08/12/2015 0942
trans-1,2-Dichloroethene	ND		1	5.0	ug/L	08/12/2015 0942
1,1-Dichloroethene	ND		1	5.0	ug/L	08/12/2015 0942
cis-1,2-Dichloroethene	ND		1	5.0	ug/L	08/12/2015 0942
1,2-Dichloropropane	ND		1	5.0	ug/L	08/12/2015 0942
trans-1,3-Dichloropropene	ND		1	5.0	ug/L	08/12/2015 0942
cis-1,3-Dichloropropene	ND		1	5.0	ug/L	08/12/2015 0942
Ethylbenzene	ND		1	5.0	ug/L	08/12/2015 0942
2-Hexanone	ND		1	10	ug/L	08/12/2015 0942
Isopropylbenzene	ND		1	5.0	ug/L	08/12/2015 0942
Methyl acetate	ND		1	5.0	ug/L	08/12/2015 0942
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	ug/L	08/12/2015 0942
4-Methyl-2-pentanone	ND		1	10	ug/L	08/12/2015 0942
Methylcyclohexane	ND		1	5.0	ug/L	08/12/2015 0942
Methylene chloride	ND		1	5.0	ug/L	08/12/2015 0942
Styrene	ND		1	5.0	ug/L	08/12/2015 0942
1,1,2,2-Tetrachloroethane	ND		1	5.0	ug/L	08/12/2015 0942
Tetrachloroethene	ND		1	5.0	ug/L	08/12/2015 0942
Toluene	ND		1	5.0	ug/L	08/12/2015 0942
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	ug/L	08/12/2015 0942
1,2,4-Trichlorobenzene	ND		1	5.0	ug/L	08/12/2015 0942
1,1,2-Trichloroethane	ND		1	5.0	ug/L	08/12/2015 0942
1,1,1-Trichloroethane	ND		1	5.0	ug/L	08/12/2015 0942

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the PQL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ82153-001

Matrix: Aqueous

Batch: 82153

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	Units	Analysis Date
Trichloroethene	ND		1	5.0	ug/L	08/12/2015 0942
Trichlorofluoromethane	ND		1	5.0	ug/L	08/12/2015 0942
Vinyl chloride	ND		1	2.0	ug/L	08/12/2015 0942
Xylenes (total)	ND		1	5.0	ug/L	08/12/2015 0942
Surrogate	Q	% Rec	Acceptance Limit			
Bromofluorobenzene		84	70-130			
1,2-Dichloroethane-d4		86	70-130			
Toluene-d8		96	70-130			

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the PQL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ82153-002

Matrix: Aqueous

Batch: 82153

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	85		1	85	60-140	08/12/2015 0841
Benzene	50	50		1	100	70-130	08/12/2015 0841
Bromodichloromethane	50	50		1	101	70-130	08/12/2015 0841
Bromoform	50	47		1	93	70-130	08/12/2015 0841
Bromomethane (Methyl bromide)	50	55		1	111	60-140	08/12/2015 0841
2-Butanone (MEK)	100	85		1	85	60-140	08/12/2015 0841
Carbon disulfide	50	55		1	109	60-140	08/12/2015 0841
Carbon tetrachloride	50	50		1	100	70-130	08/12/2015 0841
Chlorobenzene	50	51		1	102	70-130	08/12/2015 0841
Chloroethane	50	48		1	96	42-163	08/12/2015 0841
Chloroform	50	45		1	90	70-130	08/12/2015 0841
Chloromethane (Methyl chloride)	50	46		1	92	60-140	08/12/2015 0841
Cyclohexane	50	48		1	96	70-130	08/12/2015 0841
1,2-Dibromo-3-chloropropane (DBCP)	50	40		1	79	70-130	08/12/2015 0841
Dibromochloromethane	50	48		1	97	70-130	08/12/2015 0841
1,2-Dibromoethane (EDB)	50	50		1	101	70-130	08/12/2015 0841
1,4-Dichlorobenzene	50	50		1	100	70-130	08/12/2015 0841
1,2-Dichlorobenzene	50	51		1	101	70-130	08/12/2015 0841
1,3-Dichlorobenzene	50	51		1	102	70-130	08/12/2015 0841
Dichlorodifluoromethane	50	49		1	99	60-140	08/12/2015 0841
1,2-Dichloroethane	50	49		1	97	70-130	08/12/2015 0841
1,1-Dichloroethane	50	47		1	93	70-130	08/12/2015 0841
trans-1,2-Dichloroethene	50	50		1	101	70-130	08/12/2015 0841
1,1-Dichloroethene	50	54		1	107	70-130	08/12/2015 0841
cis-1,2-Dichloroethene	50	50		1	99	70-130	08/12/2015 0841
1,2-Dichloropropane	50	49		1	98	70-130	08/12/2015 0841
trans-1,3-Dichloropropene	50	49		1	99	70-130	08/12/2015 0841
cis-1,3-Dichloropropene	50	50		1	100	70-130	08/12/2015 0841
Ethylbenzene	50	52		1	105	70-130	08/12/2015 0841
2-Hexanone	100	83		1	83	60-140	08/12/2015 0841
Isopropylbenzene	50	53		1	107	70-130	08/12/2015 0841
Methyl acetate	50	40		1	80	60-140	08/12/2015 0841
Methyl tertiary butyl ether (MTBE)	50	51		1	103	70-130	08/12/2015 0841
4-Methyl-2-pentanone	100	87		1	87	60-140	08/12/2015 0841
Methylcyclohexane	50	48		1	96	70-130	08/12/2015 0841
Methylene chloride	50	48		1	95	70-130	08/12/2015 0841
Styrene	50	52		1	104	70-130	08/12/2015 0841
1,1,2,2-Tetrachloroethane	50	48		1	95	70-130	08/12/2015 0841
Tetrachloroethene	50	50		1	100	70-130	08/12/2015 0841
Toluene	50	51		1	101	70-130	08/12/2015 0841
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	50		1	100	70-130	08/12/2015 0841
1,2,4-Trichlorobenzene	50	52		1	104	70-130	08/12/2015 0841
1,1,2-Trichloroethane	50	49		1	98	70-130	08/12/2015 0841
1,1,1-Trichloroethane	50	51		1	102	70-130	08/12/2015 0841

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the PQL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ82153-002

Matrix: Aqueous

Batch: 82153

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	52		1	103	70-130	08/12/2015 0841
Trichlorofluoromethane	50	48		1	97	70-130	08/12/2015 0841
Vinyl chloride	50	50		1	100	70-130	08/12/2015 0841
Xylenes (total)	100	100		1	104	70-130	08/12/2015 0841
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		88			70-130		
1,2-Dichloroethane-d4		86			70-130		
Toluene-d8		96			70-130		

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the PQL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

SHEALY ENVIRONMENTAL SERVICES, INC.



Chain of Custody Record

Shealy Environmental Services, Inc.
 106 Vantage Point Drive
 West Columbia, South Carolina 29172
 Telephone No. (803) 791-9700 Fax No. (803) 791-9111
 www.shealylab.com

Number 18762

Client AECOM	Report to Contact Scott Bost	Sampler (Printed Name) Scott Bost	Quote No.
Address 101 Research Drive		Waybill No.	
Telephone No. / Fax No. / Email (803) 254-4400		Page 3 of 3	
City Columbia	State SC	Zip Code 29203	Number of Containers
Project Name Shelbypear			Preservative
Project Number			Analysis
Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	Matrix
RTW-1 (50')	8/9/15	1005 G	X
Analysis			
TEL WGS			
X			
QH10010			

Turn Around Time Required (Prior lab approval required for expedited TAT)	Sample Disposal	Possible Hazard Identification	QC Requirements (Specify)
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Please Specify)	<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab	<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Inhibitor <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	
1. Relinquished by / Sampler Scott Bost	Date 8/10/15	Time 1115	1. Received by
2. Relinquished by	Date	Time	2. Received by
3. Relinquished by	Date	Time	3. Received by
4. Relinquished by	Date	Time	4. Laboratory Received by [Signature]

LAB USE ONLY	Receipt Temp. 13.6 °C	Temp. Blank <input type="checkbox"/> Y <input checked="" type="checkbox"/> N
Received on Ice (Check) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Pack	Date 8-10-15	Time 1115

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
 Document Number: F-AD-016
 Revision Number: 17

Page 1 of 1
 Replaces Date: 11/07/14
 Effective Date: 04/30/15

Sample Receipt Checklist (SRC)

Client: Aecom Cooler Inspected by/date: KEP / 8-10-15 Lot #: QH10010

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>113613.6°C</u> / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by <u>SRC</u> phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	18. Were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KEP</u> Verified by: _____ Date: <u>8-10-15</u>		

Comments:

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **60328308.11**

Lot Number: **QI08038**

Date Completed: **09/11/2015**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: QI08038

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: QI08038

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-22	Aqueous	09/08/2015 1315	09/08/2015
002	MW-10i	Aqueous	09/08/2015 1415	09/08/2015

(2 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: QI08038

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-22	Aqueous	Acetone	8260B	6.5	J	ug/L	5
001	MW-22	Aqueous	Bromodichloromethane	8260B	0.62	J	ug/L	5
001	MW-22	Aqueous	Chloroform	8260B	2.3	BJ	ug/L	5
002	MW-10i	Aqueous	Chloroform	8260B	2.4	BJ	ug/L	7
002	MW-10i	Aqueous	cis-1,2-Dichloroethene	8260B	2.1	J	ug/L	7
002	MW-10i	Aqueous	Trichloroethene	8260B	890		ug/L	8

(6 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QI08038-001
Description: MW-22	Matrix: Aqueous
Date Sampled: 09/08/2015 1315	
Date Received: 09/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/10/2015 1157	PAP		84540

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	6.5	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	0.62	J	5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	2.3	BJ	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QI08038-001
Description: MW-22	Matrix: Aqueous
Date Sampled: 09/08/2015 1315	
Date Received: 09/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/10/2015 1157	PAP		84540

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		95	70-130
Toluene-d8		94	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: **AECOM**

Laboratory ID: **QI08038-002**

Description: **MW-10i**

Matrix: **Aqueous**

Date Sampled: **09/08/2015 1415**

Date Received: **09/08/2015**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	09/10/2015 1219	PAP		84540

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		100	8.1	ug/L	1
Benzene	71-43-2	8260B	ND		25	1.1	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		25	1.2	ug/L	1
Bromoform	75-25-2	8260B	ND		25	1.8	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	0.95	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	9.1	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		25	2.3	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		25	1.6	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		25	1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		25	1.4	ug/L	1
Chloroform	67-66-3	8260B	2.4	BJ	25	1.1	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	0.95	ug/L	1
Cyclohexane	110-82-7	8260B	ND		25	1.5	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.8	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		25	1.2	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	0.85	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.3	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	0.95	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	0.95	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		25	4.3	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		25	0.95	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		25	1.2	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		25	1.6	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	2.1	J	25	1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		25	1.7	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		25	1.5	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	1.5	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	1.1	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		25	1.1	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	1.3	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		25	0.70	ug/L	1
Methyl acetate	79-20-9	8260B	ND		25	1.2	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	1.2	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	1.5	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	0.80	ug/L	1
Methylene chloride	75-09-2	8260B	ND		25	2.1	ug/L	1
Styrene	100-42-5	8260B	ND		25	0.65	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	0.65	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		25	1.1	ug/L	1
Toluene	108-88-3	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	1.5	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	0.65	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	1.1	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QI08038-002
Description: MW-10i	Matrix: Aqueous
Date Sampled: 09/08/2015 1415	
Date Received: 09/08/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	09/10/2015 1219	PAP		84540

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	890		25	0.80	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		25	3.7	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		10	2.5	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	1.6	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		95	70-130
Toluene-d8		92	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ84540-001

Matrix: Aqueous

Batch: 84540

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	09/10/2015 0950
Benzene	ND		1	5.0	0.21	ug/L	09/10/2015 0950
Bromodichloromethane	ND		1	5.0	0.23	ug/L	09/10/2015 0950
Bromoform	ND		1	5.0	0.35	ug/L	09/10/2015 0950
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	09/10/2015 0950
2-Butanone (MEK)	ND		1	10	1.8	ug/L	09/10/2015 0950
Carbon disulfide	ND		1	5.0	0.45	ug/L	09/10/2015 0950
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	09/10/2015 0950
Chlorobenzene	0.22	J	1	5.0	0.20	ug/L	09/10/2015 0950
Chloroethane	ND		1	5.0	0.28	ug/L	09/10/2015 0950
Chloroform	0.36	J	1	5.0	0.21	ug/L	09/10/2015 0950
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	09/10/2015 0950
Cyclohexane	ND		1	5.0	0.30	ug/L	09/10/2015 0950
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	09/10/2015 0950
Dibromochloromethane	ND		1	5.0	0.23	ug/L	09/10/2015 0950
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	09/10/2015 0950
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	09/10/2015 0950
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	09/10/2015 0950
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	09/10/2015 0950
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	09/10/2015 0950
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	09/10/2015 0950
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	09/10/2015 0950
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	09/10/2015 0950
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	09/10/2015 0950
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	09/10/2015 0950
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	09/10/2015 0950
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	09/10/2015 0950
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	09/10/2015 0950
Ethylbenzene	ND		1	5.0	0.21	ug/L	09/10/2015 0950
2-Hexanone	ND		1	10	0.26	ug/L	09/10/2015 0950
Isopropylbenzene	ND		1	5.0	0.14	ug/L	09/10/2015 0950
Methyl acetate	ND		1	5.0	0.24	ug/L	09/10/2015 0950
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	09/10/2015 0950
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	09/10/2015 0950
Methylcyclohexane	ND		1	5.0	0.16	ug/L	09/10/2015 0950
Methylene chloride	ND		1	5.0	0.42	ug/L	09/10/2015 0950
Styrene	ND		1	5.0	0.13	ug/L	09/10/2015 0950
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	09/10/2015 0950
Tetrachloroethene	ND		1	5.0	0.22	ug/L	09/10/2015 0950
Toluene	ND		1	5.0	0.24	ug/L	09/10/2015 0950
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	09/10/2015 0950
1,2,4-Trichlorobenzene	0.25	J	1	5.0	0.13	ug/L	09/10/2015 0950
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	09/10/2015 0950
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	09/10/2015 0950

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ84540-001

Matrix: Aqueous

Batch: 84540

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	09/10/2015 0950
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	09/10/2015 0950
Vinyl chloride	ND		1	2.0	0.50	ug/L	09/10/2015 0950
Xylenes (total)	ND		1	5.0	0.32	ug/L	09/10/2015 0950
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		101	70-130				
1,2-Dichloroethane-d4		102	70-130				
Toluene-d8		96	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ84540-002

Matrix: Aqueous

Batch: 84540

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	107	60-140	09/10/2015 0836
Benzene	50	51		1	102	70-130	09/10/2015 0836
Bromodichloromethane	50	52		1	104	70-130	09/10/2015 0836
Bromoform	50	51		1	103	70-130	09/10/2015 0836
Bromomethane (Methyl bromide)	50	58		1	116	60-140	09/10/2015 0836
2-Butanone (MEK)	100	110		1	110	60-140	09/10/2015 0836
Carbon disulfide	50	57		1	114	60-140	09/10/2015 0836
Carbon tetrachloride	50	55		1	110	70-130	09/10/2015 0836
Chlorobenzene	50	47		1	95	70-130	09/10/2015 0836
Chloroethane	50	58		1	116	60-140	09/10/2015 0836
Chloroform	50	52		1	104	70-130	09/10/2015 0836
Chloromethane (Methyl chloride)	50	59		1	118	60-140	09/10/2015 0836
Cyclohexane	50	54		1	107	70-130	09/10/2015 0836
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	96	70-130	09/10/2015 0836
Dibromochloromethane	50	51		1	101	70-130	09/10/2015 0836
1,2-Dibromoethane (EDB)	50	48		1	97	70-130	09/10/2015 0836
1,4-Dichlorobenzene	50	48		1	97	70-130	09/10/2015 0836
1,3-Dichlorobenzene	50	49		1	98	70-130	09/10/2015 0836
1,2-Dichlorobenzene	50	49		1	99	70-130	09/10/2015 0836
Dichlorodifluoromethane	50	67		1	134	60-140	09/10/2015 0836
1,2-Dichloroethane	50	55		1	110	70-130	09/10/2015 0836
1,1-Dichloroethane	50	53		1	106	70-130	09/10/2015 0836
trans-1,2-Dichloroethene	50	55		1	110	70-130	09/10/2015 0836
cis-1,2-Dichloroethene	50	54		1	108	70-130	09/10/2015 0836
1,1-Dichloroethene	50	55		1	110	70-130	09/10/2015 0836
1,2-Dichloropropane	50	49		1	98	70-130	09/10/2015 0836
trans-1,3-Dichloropropene	50	48		1	96	70-130	09/10/2015 0836
cis-1,3-Dichloropropene	50	50		1	99	70-130	09/10/2015 0836
Ethylbenzene	50	50		1	101	70-130	09/10/2015 0836
2-Hexanone	100	94		1	94	60-140	09/10/2015 0836
Isopropylbenzene	50	51		1	102	70-130	09/10/2015 0836
Methyl acetate	50	62		1	124	60-140	09/10/2015 0836
Methyl tertiary butyl ether (MTBE)	50	55		1	110	70-130	09/10/2015 0836
4-Methyl-2-pentanone	100	98		1	98	60-140	09/10/2015 0836
Methylcyclohexane	50	53		1	107	70-130	09/10/2015 0836
Methylene chloride	50	54		1	108	70-130	09/10/2015 0836
Styrene	50	50		1	99	70-130	09/10/2015 0836
1,1,2,2-Tetrachloroethane	50	49		1	97	70-130	09/10/2015 0836
Tetrachloroethene	50	51		1	103	70-130	09/10/2015 0836
Toluene	50	49		1	98	70-130	09/10/2015 0836
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	55		1	111	70-130	09/10/2015 0836
1,2,4-Trichlorobenzene	50	51		1	102	70-130	09/10/2015 0836
1,1,1-Trichloroethane	50	56		1	111	70-130	09/10/2015 0836
1,1,2-Trichloroethane	50	50		1	99	70-130	09/10/2015 0836

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ84540-002

Matrix: Aqueous

Batch: 84540

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	52		1	104	70-130	09/10/2015 0836
Trichlorofluoromethane	50	59		1	118	70-130	09/10/2015 0836
Vinyl chloride	50	59		1	118	70-130	09/10/2015 0836
Xylenes (total)	100	100		1	101	70-130	09/10/2015 0836
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		98	70-130				
1,2-Dichloroethane-d4		99	70-130				
Toluene-d8		95	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: QI08038-002MS

Matrix: Aqueous

Batch: 84540

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	ND	500	390		5	78	60-140	09/10/2015 1721
Benzene	ND	250	220		5	89	70-130	09/10/2015 1721
Bromodichloromethane	ND	250	220		5	89	71-143	09/10/2015 1721
Bromoform	ND	250	210		5	84	65-131	09/10/2015 1721
Bromomethane (Methyl bromide)	ND	250	240		5	96	36-168	09/10/2015 1721
2-Butanone (MEK)	ND	500	440		5	87	60-140	09/10/2015 1721
Carbon disulfide	ND	250	220		5	88	60-140	09/10/2015 1721
Carbon tetrachloride	ND	250	240		5	95	37-166	09/10/2015 1721
Chlorobenzene	ND	250	210		5	84	78-129	09/10/2015 1721
Chloroethane	ND	250	240		5	95	60-140	09/10/2015 1721
Chloroform	2.4	250	230		5	91	63-123	09/10/2015 1721
Chloromethane (Methyl chloride)	ND	250	240		5	96	20-158	09/10/2015 1721
Cyclohexane	ND	250	230		5	91	70-130	09/10/2015 1721
1,2-Dibromo-3-chloropropane (DBCP)	ND	250	170	N	5	69	70-130	09/10/2015 1721
Dibromochloromethane	ND	250	210		5	85	74-134	09/10/2015 1721
1,2-Dibromoethane (EDB)	ND	250	210		5	83	70-130	09/10/2015 1721
1,2-Dichlorobenzene	ND	250	210		5	84	70-130	09/10/2015 1721
1,3-Dichlorobenzene	ND	250	210		5	85	70-130	09/10/2015 1721
1,4-Dichlorobenzene	ND	250	210		5	85	70-130	09/10/2015 1721
Dichlorodifluoromethane	ND	250	300		5	121	10-158	09/10/2015 1721
1,1-Dichloroethane	ND	250	230		5	91	69-132	09/10/2015 1721
1,2-Dichloroethane	ND	250	230		5	90	70-130	09/10/2015 1721
1,1-Dichloroethene	ND	250	240		5	95	50-132	09/10/2015 1721
cis-1,2-Dichloroethene	2.1	250	240		5	93	70-130	09/10/2015 1721
trans-1,2-Dichloroethene	ND	250	240		5	94	70-130	09/10/2015 1721
1,2-Dichloropropane	ND	250	210		5	85	71-126	09/10/2015 1721
cis-1,3-Dichloropropene	ND	250	220		5	87	69-130	09/10/2015 1721
trans-1,3-Dichloropropene	ND	250	210		5	83	73-131	09/10/2015 1721
Ethylbenzene	ND	250	220		5	89	70-130	09/10/2015 1721
2-Hexanone	ND	500	400		5	80	60-140	09/10/2015 1721
Isopropylbenzene	ND	250	210		5	85	70-130	09/10/2015 1721
Methyl acetate	ND	250	210		5	84	15-128	09/10/2015 1721
Methyl tertiary butyl ether (MTBE)	ND	250	210		5	84	70-130	09/10/2015 1721
4-Methyl-2-pentanone	ND	500	400		5	81	60-140	09/10/2015 1721
Methylcyclohexane	ND	250	230		5	91	70-130	09/10/2015 1721
Methylene chloride	ND	250	220		5	90	69-129	09/10/2015 1721
Styrene	ND	250	220		5	88	70-130	09/10/2015 1721
1,1,2,2-Tetrachloroethane	ND	250	200		5	80	60-155	09/10/2015 1721
Tetrachloroethene	ND	250	230		5	91	70-130	09/10/2015 1721
Toluene	ND	250	230		5	92	70-130	09/10/2015 1721
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	250	240		5	94	70-130	09/10/2015 1721
1,2,4-Trichlorobenzene	ND	250	190		5	77	70-130	09/10/2015 1721
1,1,1-Trichloroethane	ND	250	240		5	95	77-132	09/10/2015 1721
1,1,2-Trichloroethane	ND	250	210		5	86	77-132	09/10/2015 1721

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: QI08038-002MS

Matrix: Aqueous

Batch: 84540

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	890	250	1100	E	5	73	73-124	09/10/2015 1721
Trichlorofluoromethane	ND	250	260		5	105	60-140	09/10/2015 1721
Vinyl chloride	ND	250	250		5	98	29-159	09/10/2015 1721
Xylenes (total)	ND	500	430		5	87	70-130	09/10/2015 1721
Surrogate	Q	% Rec	Acceptance Limit					
1,2-Dichloroethane-d4		94	70-130					
Bromofluorobenzene		102	70-130					
Toluene-d8		100	70-130					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: QI08038-002MD

Batch: 84540

Matrix: Aqueous

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	ND	500	410		5	81	3.4	60-140	20	09/10/2015 1742
Benzene	ND	250	260		5	102	14	70-130	20	09/10/2015 1742
Bromodichloromethane	ND	250	260		5	103	15	71-143	20	09/10/2015 1742
Bromoform	ND	250	240		5	97	14	65-131	20	09/10/2015 1742
Bromomethane (Methyl bromide)	ND	250	270		5	109	12	36-168	20	09/10/2015 1742
2-Butanone (MEK)	ND	500	450		5	90	3.3	60-140	20	09/10/2015 1742
Carbon disulfide	ND	250	250		5	101	13	60-140	20	09/10/2015 1742
Carbon tetrachloride	ND	250	260		5	104	9.2	37-166	20	09/10/2015 1742
Chlorobenzene	ND	250	240		5	94	11	78-129	20	09/10/2015 1742
Chloroethane	ND	250	260		5	105	10	60-140	20	09/10/2015 1742
Chloroform	2.4	250	260		5	102	12	63-123	20	09/10/2015 1742
Chloromethane (Methyl chloride)	ND	250	260		5	105	9.9	20-158	20	09/10/2015 1742
Cyclohexane	ND	250	250		5	100	8.8	70-130	20	09/10/2015 1742
1,2-Dibromo-3-chloropropane (DBCP)	ND	250	200		5	79	14	70-130	20	09/10/2015 1742
Dibromochloromethane	ND	250	240		5	98	14	74-134	20	09/10/2015 1742
1,2-Dibromoethane (EDB)	ND	250	240		5	95	14	70-130	20	09/10/2015 1742
1,2-Dichlorobenzene	ND	250	230		5	93	11	70-130	20	09/10/2015 1742
1,3-Dichlorobenzene	ND	250	240		5	96	11	70-130	20	09/10/2015 1742
1,4-Dichlorobenzene	ND	250	240		5	96	12	70-130	20	09/10/2015 1742
Dichlorodifluoromethane	ND	250	300		5	121	0.073	10-158	20	09/10/2015 1742
1,1-Dichloroethane	ND	250	260		5	103	12	69-132	20	09/10/2015 1742
1,2-Dichloroethane	ND	250	250		5	101	11	70-130	20	09/10/2015 1742
1,1-Dichloroethene	ND	250	270		5	108	13	50-132	20	09/10/2015 1742
cis-1,2-Dichloroethene	2.1	250	260		5	103	10	70-130	20	09/10/2015 1742
trans-1,2-Dichloroethene	ND	250	270		5	109	14	70-130	20	09/10/2015 1742
1,2-Dichloropropane	ND	250	250		5	99	16	71-126	20	09/10/2015 1742
cis-1,3-Dichloropropene	ND	250	250		5	102	16	69-130	20	09/10/2015 1742
trans-1,3-Dichloropropene	ND	250	240		5	95	14	73-131	20	09/10/2015 1742
Ethylbenzene	ND	250	250		5	99	10	70-130	20	09/10/2015 1742
2-Hexanone	ND	500	450		5	91	13	60-140	20	09/10/2015 1742
Isopropylbenzene	ND	250	230		5	93	8.9	70-130	20	09/10/2015 1742
Methyl acetate	ND	250	220		5	88	4.9	15-128	20	09/10/2015 1742
Methyl tertiary butyl ether (MTBE)	ND	250	230		5	94	11	70-130	20	09/10/2015 1742
4-Methyl-2-pentanone	ND	500	460		5	93	13	60-140	20	09/10/2015 1742
Methylcyclohexane	ND	250	250		5	98	8.0	70-130	20	09/10/2015 1742
Methylene chloride	ND	250	260		5	102	13	69-129	20	09/10/2015 1742
Styrene	ND	250	250		5	99	12	70-130	20	09/10/2015 1742
1,1,2,2-Tetrachloroethane	ND	250	230		5	90	11	60-155	20	09/10/2015 1742
Tetrachloroethene	ND	250	250		5	100	9.5	70-130	20	09/10/2015 1742
Toluene	ND	250	260		5	106	14	70-130	20	09/10/2015 1742
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	250	260		5	105	11	70-130	20	09/10/2015 1742
1,2,4-Trichlorobenzene	ND	250	220		5	87	12	70-130	20	09/10/2015 1742
1,1,1-Trichloroethane	ND	250	270		5	107	12	77-132	20	09/10/2015 1742
1,1,2-Trichloroethane	ND	250	240		5	97	12	77-132	20	09/10/2015 1742

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: QI08038-002MD

Matrix: Aqueous

Batch: 84540

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
Trichloroethene	890	250	1100	E	5	84	2.4	73-124	20	09/10/2015 1742	
Trichlorofluoromethane	ND	250	280		5	112	6.6	60-140	20	09/10/2015 1742	
Vinyl chloride	ND	250	260		5	105	6.4	29-159	20	09/10/2015 1742	
Xylenes (total)	ND	500	480		5	97	11	70-130	20	09/10/2015 1742	
Surrogate	Q	% Rec	Acceptance Limit								
1,2-Dichloroethane-d4		90	70-130								
Bromofluorobenzene		99	70-130								
Toluene-d8		100	70-130								

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SHEALY
CAS Contract

PAGE 1 OF 1

Project Name: SHAKESPEAR Project Address: SCOTT ROSS Company Address: RECOM 101 RESEARCH DR COLUMBIA SC 29203		Project Number: 6032830811 Email Address: SCOTT.ROSS@RECOM.COM		ANALYSIS REQUESTED (Include Method Number and Container Preservative) PRESERVATIVE: 1	
Form # 8032544500 Sample Name: James Leaphart		Sample's P. into Name: JAMES LEAPHART		PRESERVATIVE KEY: 0. NONE 1. HCL 2. HNO3 3. H2SO4 4. NaOH 5. Zn Acetate 6. NaOH 7. NaHSO4 9. Other	
CLIENT SAMPLE ID NA-22 NA-101		LAB ID 9-8-15 1315 9-8-15 1415		MATRIX GW GW	
SAMPLING DATE 9-8-15 1315 9-8-15 1415		TIME 1315 1415		NUMBER OF CONTAINERS 3 3	
SPECIAL INSTRUCTIONS/COMMENTS See CRAP <input type="checkbox"/>					
RECEIVED BY: James Leaphart Signature: <i>James Leaphart</i> Printed Name: JAMES LEAPHART Firm: RECOM Date/Time: 9-8-15 / 1537		RECEIVED BY: Scott Ross Signature: <i>Scott Ross</i> Printed Name: SCOTT ROSS Firm: RECOM Date/Time: 9-8-15 / 1537		CUSTODY SEALS: Y N RELINQUISHED BY:	
RECEIVED BY: James Leaphart Signature: <i>James Leaphart</i> Printed Name: JAMES LEAPHART Firm: RECOM Date/Time: 9-8-15 / 1537		RECEIVED BY: Scott Ross Signature: <i>Scott Ross</i> Printed Name: SCOTT ROSS Firm: RECOM Date/Time: 9-8-15 / 1537		TURNAROUND REQUIREMENTS (RUSH (BURR-APRES APPL)) STANDARD <input checked="" type="checkbox"/> RUSH <input type="checkbox"/> REQUESTED FAX DATE: _____ REQUESTED REPORT DATE: _____	
RECEIVED BY: James Leaphart Signature: <i>James Leaphart</i> Printed Name: JAMES LEAPHART Firm: RECOM Date/Time: 9-8-15 / 1537		RECEIVED BY: Scott Ross Signature: <i>Scott Ross</i> Printed Name: SCOTT ROSS Firm: RECOM Date/Time: 9-8-15 / 1537		REPORT REQUIREMENTS I. Results + QC Summaries (CAS DUR MISUSED as req. req) II. Heaps + QC and Calibration Summaries III. Data Validation Report with Raw Data IV. Specialized Forms / Custom Report YES <input type="checkbox"/> NO <input type="checkbox"/>	
RECEIVED BY: James Leaphart Signature: <i>James Leaphart</i> Printed Name: JAMES LEAPHART Firm: RECOM Date/Time: 9-8-15 / 1537		RECEIVED BY: Scott Ross Signature: <i>Scott Ross</i> Printed Name: SCOTT ROSS Firm: RECOM Date/Time: 9-8-15 / 1537		INVOICE INFORMATION FOP: _____ M.I.L.T.D.: _____	

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SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
 Document Number: F.A.D-016
 Revision Number: 17

Page 1 of 1
 Replaces Date: 11/07/14
 Effective Date: 04/30/15

Sample Receipt Checklist (SRC)

Client: Accom Cooler Inspected by/date: KLW 1-8-15 Lot #: QI08038

Means of receipt: <input checked="" type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>111/111</u> °C / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 4. Is the commercial courier's packing slip attached to this form?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/> 18. Were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	24. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KLW</u> Verified by: _____ Date: <u>1-8-15</u>		

Comments:

Report of Analysis

AECOM

4016 Salt Pointe Parkway
North Charleston, SC 29405
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **60328308.11**

Lot Number: **QH11036**

Date Completed: **08/17/2015**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: QH11036

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: QH11036

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-12	Aqueous	08/10/2015 1015	08/11/2015
002	MW-14	Aqueous	08/10/2015 1105	08/11/2015
003	MW-15	Aqueous	08/10/2015 1220	08/11/2015
004	MW-16	Aqueous	08/10/2015 1355	08/11/2015
005	MW-17	Aqueous	08/10/2015 1455	08/11/2015
006	MW-13	Aqueous	08/10/2015 1555	08/11/2015
007	MW-19	Aqueous	08/11/2015 1015	08/11/2015
008	MW-21	Aqueous	08/11/2015 1120	08/11/2015
009	MW-20	Aqueous	08/11/2015 1328	08/11/2015
010	TRIP BLANK	Aqueous	08/11/2015	08/11/2015

(10 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: QH11036

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-12	Aqueous	cis-1,2-Dichloroethene	8260B	22		ug/L	5
001	MW-12	Aqueous	Tetrachloroethene	8260B	0.49	J	ug/L	5
001	MW-12	Aqueous	Trichloroethene	8260B	39		ug/L	6
002	MW-14	Aqueous	Chloroform	8260B	1.8	J	ug/L	7
002	MW-14	Aqueous	Trichloroethene	8260B	24		ug/L	8
003	MW-15	Aqueous	Chloroform	8260B	1.4	J	ug/L	9
003	MW-15	Aqueous	Trichloroethene	8260B	15		ug/L	10
004	MW-16	Aqueous	Trichloroethene	8260B	38		ug/L	12
005	MW-17	Aqueous	Chloroform	8260B	0.53	J	ug/L	13
005	MW-17	Aqueous	Trichloroethene	8260B	18		ug/L	14
006	MW-13	Aqueous	Chloroform	8260B	0.59	J	ug/L	15
006	MW-13	Aqueous	cis-1,2-Dichloroethene	8260B	3.2	J	ug/L	15
006	MW-13	Aqueous	Trichloroethene	8260B	13		ug/L	16
007	MW-19	Aqueous	Chloroform	8260B	6.8		ug/L	17
008	MW-21	Aqueous	Bromodichloromethane	8260B	0.40	J	ug/L	19
008	MW-21	Aqueous	Chloroform	8260B	4.5	J	ug/L	19
009	MW-20	Aqueous	Bromodichloromethane	8260B	0.46	J	ug/L	21
009	MW-20	Aqueous	Chloroform	8260B	7.1		ug/L	21
009	MW-20	Aqueous	Tetrachloroethene	8260B	0.64	J	ug/L	21
009	MW-20	Aqueous	Trichloroethene	8260B	110		ug/L	22

(20 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH11036-001
Description: MW-12	Matrix: Aqueous
Date Sampled: 08/10/2015 1015	
Date Received: 08/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/14/2015 1225	ALL		82416

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	22		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	0.49	J	5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH11036-001
Description: MW-12	Matrix: Aqueous
Date Sampled: 08/10/2015 1015	
Date Received: 08/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/14/2015 1225	ALL		82416

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	39		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH11036-002
Description: MW-14	Matrix: Aqueous
Date Sampled: 08/10/2015 1105	
Date Received: 08/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/14/2015 1247	ALL		82416

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	1.8	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH11036-002
Description: MW-14	Matrix: Aqueous
Date Sampled: 08/10/2015 1105	
Date Received: 08/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/14/2015 1247	ALL		82416

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	24		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH11036-003
Description: MW-15	Matrix: Aqueous
Date Sampled: 08/10/2015 1220	
Date Received: 08/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/14/2015 1309	ALL		82416

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	1.4	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH11036-003
Description: MW-15	Matrix: Aqueous
Date Sampled: 08/10/2015 1220	
Date Received: 08/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/14/2015 1309	ALL		82416

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	15		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		94	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH11036-004
Description: MW-16	Matrix: Aqueous
Date Sampled: 08/10/2015 1355	
Date Received: 08/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/14/2015 1332	ALL		82416

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH11036-004
Description: MW-16	Matrix: Aqueous
Date Sampled: 08/10/2015 1355	
Date Received: 08/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/14/2015 1332	ALL		82416

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	38		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

 Client: **AECOM**

 Laboratory ID: **QH11036-005**

 Description: **MW-17**

 Matrix: **Aqueous**

 Date Sampled: **08/10/2015 1455**

 Date Received: **08/11/2015**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/14/2015 1354	ALL		82416

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	0.53	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH11036-005
Description: MW-17	Matrix: Aqueous
Date Sampled: 08/10/2015 1455	
Date Received: 08/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/14/2015 1354	ALL		82416

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	18		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		92	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH11036-006
Description: MW-13	Matrix: Aqueous
Date Sampled: 08/10/2015 1555	
Date Received: 08/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/14/2015 1416	ALL		82416

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	0.59	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	3.2	J	5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH11036-006
Description: MW-13	Matrix: Aqueous
Date Sampled: 08/10/2015 1555	
Date Received: 08/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/14/2015 1416	ALL		82416

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	13		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		98	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH11036-007
Description: MW-19	Matrix: Aqueous
Date Sampled: 08/11/2015 1015	
Date Received: 08/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/14/2015 1439	ALL		82416

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	6.8		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH11036-007
Description: MW-19	Matrix: Aqueous
Date Sampled: 08/11/2015 1015	
Date Received: 08/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/14/2015 1439	ALL		82416

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH11036-008
Description: MW-21	Matrix: Aqueous
Date Sampled: 08/11/2015 1120	
Date Received: 08/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/14/2015 1501	ALL		82416

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	0.40	J	5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	4.5	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH11036-008
Description: MW-21	Matrix: Aqueous
Date Sampled: 08/11/2015 1120	
Date Received: 08/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/14/2015 1501	ALL		82416

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		94	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH11036-009
Description: MW-20	Matrix: Aqueous
Date Sampled: 08/11/2015 1328	
Date Received: 08/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/14/2015 1524	ALL		82416

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	0.46	J	5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	7.1		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	0.64	J	5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH11036-009
Description: MW-20	Matrix: Aqueous
Date Sampled: 08/11/2015 1328	
Date Received: 08/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/14/2015 1524	ALL		82416

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	110		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		93	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH11036-010
Description: TRIP BLANK	Matrix: Aqueous
Date Sampled: 08/11/2015	
Date Received: 08/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/13/2015 1113	SES		82326

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH11036-010
Description: TRIP BLANK	Matrix: Aqueous
Date Sampled: 08/11/2015	
Date Received: 08/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/13/2015 1113	SES		82326

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		78	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		88	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ82326-001

Matrix: Aqueous

Batch: 82326

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	08/13/2015 1038
Benzene	ND		1	5.0	0.21	ug/L	08/13/2015 1038
Bromodichloromethane	ND		1	5.0	0.23	ug/L	08/13/2015 1038
Bromoform	ND		1	5.0	0.35	ug/L	08/13/2015 1038
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	08/13/2015 1038
2-Butanone (MEK)	ND		1	10	1.8	ug/L	08/13/2015 1038
Carbon disulfide	ND		1	5.0	0.45	ug/L	08/13/2015 1038
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	08/13/2015 1038
Chlorobenzene	ND		1	5.0	0.20	ug/L	08/13/2015 1038
Chloroethane	ND		1	5.0	0.28	ug/L	08/13/2015 1038
Chloroform	ND		1	5.0	0.21	ug/L	08/13/2015 1038
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	08/13/2015 1038
Cyclohexane	ND		1	5.0	0.30	ug/L	08/13/2015 1038
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	08/13/2015 1038
Dibromochloromethane	ND		1	5.0	0.23	ug/L	08/13/2015 1038
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	08/13/2015 1038
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	08/13/2015 1038
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	08/13/2015 1038
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	08/13/2015 1038
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	08/13/2015 1038
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	08/13/2015 1038
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	08/13/2015 1038
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	08/13/2015 1038
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	08/13/2015 1038
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	08/13/2015 1038
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	08/13/2015 1038
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	08/13/2015 1038
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	08/13/2015 1038
Ethylbenzene	ND		1	5.0	0.21	ug/L	08/13/2015 1038
2-Hexanone	ND		1	10	0.26	ug/L	08/13/2015 1038
Isopropylbenzene	ND		1	5.0	0.14	ug/L	08/13/2015 1038
Methyl acetate	ND		1	5.0	0.24	ug/L	08/13/2015 1038
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	08/13/2015 1038
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	08/13/2015 1038
Methylcyclohexane	ND		1	5.0	0.16	ug/L	08/13/2015 1038
Methylene chloride	ND		1	5.0	0.42	ug/L	08/13/2015 1038
Styrene	ND		1	5.0	0.13	ug/L	08/13/2015 1038
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	08/13/2015 1038
Tetrachloroethene	ND		1	5.0	0.22	ug/L	08/13/2015 1038
Toluene	ND		1	5.0	0.24	ug/L	08/13/2015 1038
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	08/13/2015 1038
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	08/13/2015 1038
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	08/13/2015 1038
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	08/13/2015 1038

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ82326-001

Matrix: Aqueous

Batch: 82326

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	08/13/2015 1038
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	08/13/2015 1038
Vinyl chloride	ND		1	2.0	0.50	ug/L	08/13/2015 1038
Xylenes (total)	ND		1	5.0	0.32	ug/L	08/13/2015 1038
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		102	70-130				
1,2-Dichloroethane-d4		76	70-130				
Toluene-d8		87	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ82326-002

Matrix: Aqueous

Batch: 82326

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	77		1	77	60-140	08/13/2015 0940
Benzene	50	50		1	100	70-130	08/13/2015 0940
Bromodichloromethane	50	50		1	101	70-130	08/13/2015 0940
Bromoform	50	53		1	105	70-130	08/13/2015 0940
Bromomethane (Methyl bromide)	50	46		1	91	60-140	08/13/2015 0940
2-Butanone (MEK)	100	87		1	87	60-140	08/13/2015 0940
Carbon disulfide	50	47		1	93	60-140	08/13/2015 0940
Carbon tetrachloride	50	51		1	101	70-130	08/13/2015 0940
Chlorobenzene	50	53		1	105	70-130	08/13/2015 0940
Chloroethane	50	46		1	93	42-163	08/13/2015 0940
Chloroform	50	45		1	90	70-130	08/13/2015 0940
Chloromethane (Methyl chloride)	50	42		1	84	60-140	08/13/2015 0940
Cyclohexane	50	47		1	95	70-130	08/13/2015 0940
1,2-Dibromo-3-chloropropane (DBCP)	50	52		1	105	70-130	08/13/2015 0940
Dibromochloromethane	50	55		1	110	70-130	08/13/2015 0940
1,2-Dibromoethane (EDB)	50	54		1	107	70-130	08/13/2015 0940
1,3-Dichlorobenzene	50	54		1	107	70-130	08/13/2015 0940
1,4-Dichlorobenzene	50	53		1	107	70-130	08/13/2015 0940
1,2-Dichlorobenzene	50	54		1	108	70-130	08/13/2015 0940
Dichlorodifluoromethane	50	48		1	96	60-140	08/13/2015 0940
1,2-Dichloroethane	50	49		1	99	70-130	08/13/2015 0940
1,1-Dichloroethane	50	46		1	92	70-130	08/13/2015 0940
1,1-Dichloroethene	50	50		1	100	70-130	08/13/2015 0940
trans-1,2-Dichloroethene	50	48		1	96	70-130	08/13/2015 0940
cis-1,2-Dichloroethene	50	47		1	94	70-130	08/13/2015 0940
1,2-Dichloropropane	50	49		1	98	70-130	08/13/2015 0940
trans-1,3-Dichloropropene	50	53		1	105	70-130	08/13/2015 0940
cis-1,3-Dichloropropene	50	50		1	100	70-130	08/13/2015 0940
Ethylbenzene	50	54		1	109	70-130	08/13/2015 0940
2-Hexanone	100	100		1	102	60-140	08/13/2015 0940
Isopropylbenzene	50	54		1	109	70-130	08/13/2015 0940
Methyl acetate	50	50		1	100	60-140	08/13/2015 0940
Methyl tertiary butyl ether (MTBE)	50	46		1	92	70-130	08/13/2015 0940
4-Methyl-2-pentanone	100	97		1	97	60-140	08/13/2015 0940
Methylcyclohexane	50	52		1	105	70-130	08/13/2015 0940
Methylene chloride	50	47		1	95	70-130	08/13/2015 0940
Styrene	50	53		1	107	70-130	08/13/2015 0940
1,1,2,2-Tetrachloroethane	50	52		1	104	70-130	08/13/2015 0940
Tetrachloroethene	50	58		1	115	70-130	08/13/2015 0940
Toluene	50	54		1	107	70-130	08/13/2015 0940
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	53		1	105	70-130	08/13/2015 0940
1,2,4-Trichlorobenzene	50	54		1	109	70-130	08/13/2015 0940
1,1,1-Trichloroethane	50	47		1	95	70-130	08/13/2015 0940
1,1,2-Trichloroethane	50	53		1	106	70-130	08/13/2015 0940

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ82326-002

Matrix: Aqueous

Batch: 82326

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	52		1	104	70-130	08/13/2015 0940
Trichlorofluoromethane	50	49		1	98	70-130	08/13/2015 0940
Vinyl chloride	50	46		1	91	70-130	08/13/2015 0940
Xylenes (total)	100	110		1	107	70-130	08/13/2015 0940
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		103	70-130				
1,2-Dichloroethane-d4		77	70-130				
Toluene-d8		90	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ82416-001

Matrix: Aqueous

Batch: 82416

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	08/14/2015 1044
Benzene	ND		1	5.0	0.21	ug/L	08/14/2015 1044
Bromodichloromethane	ND		1	5.0	0.23	ug/L	08/14/2015 1044
Bromoform	ND		1	5.0	0.35	ug/L	08/14/2015 1044
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	08/14/2015 1044
2-Butanone (MEK)	ND		1	10	1.8	ug/L	08/14/2015 1044
Carbon disulfide	ND		1	5.0	0.45	ug/L	08/14/2015 1044
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	08/14/2015 1044
Chlorobenzene	ND		1	5.0	0.20	ug/L	08/14/2015 1044
Chloroethane	ND		1	5.0	0.28	ug/L	08/14/2015 1044
Chloroform	ND		1	5.0	0.21	ug/L	08/14/2015 1044
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	08/14/2015 1044
Cyclohexane	ND		1	5.0	0.30	ug/L	08/14/2015 1044
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	08/14/2015 1044
Dibromochloromethane	ND		1	5.0	0.23	ug/L	08/14/2015 1044
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	08/14/2015 1044
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	08/14/2015 1044
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	08/14/2015 1044
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	08/14/2015 1044
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	08/14/2015 1044
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	08/14/2015 1044
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	08/14/2015 1044
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	08/14/2015 1044
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	08/14/2015 1044
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	08/14/2015 1044
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	08/14/2015 1044
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	08/14/2015 1044
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	08/14/2015 1044
Ethylbenzene	ND		1	5.0	0.21	ug/L	08/14/2015 1044
2-Hexanone	ND		1	10	0.26	ug/L	08/14/2015 1044
Isopropylbenzene	ND		1	5.0	0.14	ug/L	08/14/2015 1044
Methyl acetate	ND		1	5.0	0.24	ug/L	08/14/2015 1044
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	08/14/2015 1044
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	08/14/2015 1044
Methylcyclohexane	ND		1	5.0	0.16	ug/L	08/14/2015 1044
Methylene chloride	ND		1	5.0	0.42	ug/L	08/14/2015 1044
Styrene	ND		1	5.0	0.13	ug/L	08/14/2015 1044
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	08/14/2015 1044
Tetrachloroethene	ND		1	5.0	0.22	ug/L	08/14/2015 1044
Toluene	ND		1	5.0	0.24	ug/L	08/14/2015 1044
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	08/14/2015 1044
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	08/14/2015 1044
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	08/14/2015 1044
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	08/14/2015 1044

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ82416-001

Matrix: Aqueous

Batch: 82416

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	08/14/2015 1044
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	08/14/2015 1044
Vinyl chloride	ND		1	2.0	0.50	ug/L	08/14/2015 1044
Xylenes (total)	ND		1	5.0	0.32	ug/L	08/14/2015 1044
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		99	70-130				
1,2-Dichloroethane-d4		88	70-130				
Toluene-d8		93	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ82416-002

Matrix: Aqueous

Batch: 82416

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	84		1	84	60-140	08/14/2015 0944
Benzene	50	48		1	96	70-130	08/14/2015 0944
Bromodichloromethane	50	47		1	93	70-130	08/14/2015 0944
Bromoform	50	42		1	85	70-130	08/14/2015 0944
Bromomethane (Methyl bromide)	50	49		1	97	60-140	08/14/2015 0944
2-Butanone (MEK)	100	83		1	83	60-140	08/14/2015 0944
Carbon disulfide	50	46		1	93	60-140	08/14/2015 0944
Carbon tetrachloride	50	50		1	99	70-130	08/14/2015 0944
Chlorobenzene	50	49		1	98	70-130	08/14/2015 0944
Chloroethane	50	49		1	98	42-163	08/14/2015 0944
Chloroform	50	44		1	88	70-130	08/14/2015 0944
Chloromethane (Methyl chloride)	50	46		1	91	60-140	08/14/2015 0944
Cyclohexane	50	48		1	95	70-130	08/14/2015 0944
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	93	70-130	08/14/2015 0944
Dibromochloromethane	50	48		1	96	70-130	08/14/2015 0944
1,2-Dibromoethane (EDB)	50	48		1	97	70-130	08/14/2015 0944
1,4-Dichlorobenzene	50	49		1	98	70-130	08/14/2015 0944
1,2-Dichlorobenzene	50	50		1	100	70-130	08/14/2015 0944
1,3-Dichlorobenzene	50	50		1	100	70-130	08/14/2015 0944
Dichlorodifluoromethane	50	50		1	101	60-140	08/14/2015 0944
1,2-Dichloroethane	50	47		1	94	70-130	08/14/2015 0944
1,1-Dichloroethane	50	46		1	91	70-130	08/14/2015 0944
trans-1,2-Dichloroethene	50	47		1	94	70-130	08/14/2015 0944
1,1-Dichloroethene	50	50		1	100	70-130	08/14/2015 0944
cis-1,2-Dichloroethene	50	46		1	92	70-130	08/14/2015 0944
1,2-Dichloropropane	50	46		1	93	70-130	08/14/2015 0944
trans-1,3-Dichloropropene	50	47		1	95	70-130	08/14/2015 0944
cis-1,3-Dichloropropene	50	46		1	92	70-130	08/14/2015 0944
Ethylbenzene	50	51		1	103	70-130	08/14/2015 0944
2-Hexanone	100	92		1	92	60-140	08/14/2015 0944
Isopropylbenzene	50	52		1	104	70-130	08/14/2015 0944
Methyl acetate	50	44		1	89	60-140	08/14/2015 0944
Methyl tertiary butyl ether (MTBE)	50	44		1	88	70-130	08/14/2015 0944
4-Methyl-2-pentanone	100	90		1	90	60-140	08/14/2015 0944
Methylcyclohexane	50	51		1	103	70-130	08/14/2015 0944
Methylene chloride	50	45		1	91	70-130	08/14/2015 0944
Styrene	50	49		1	99	70-130	08/14/2015 0944
1,1,2,2-Tetrachloroethane	50	48		1	96	70-130	08/14/2015 0944
Tetrachloroethene	50	54		1	108	70-130	08/14/2015 0944
Toluene	50	50		1	100	70-130	08/14/2015 0944
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	52		1	105	70-130	08/14/2015 0944
1,2,4-Trichlorobenzene	50	50		1	100	70-130	08/14/2015 0944
1,1,1-Trichloroethane	50	47		1	94	70-130	08/14/2015 0944
1,1,2-Trichloroethane	50	49		1	97	70-130	08/14/2015 0944

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ82416-002

Matrix: Aqueous

Batch: 82416

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	50		1	101	70-130	08/14/2015 0944
Trichlorofluoromethane	50	50		1	99	70-130	08/14/2015 0944
Vinyl chloride	50	49		1	97	70-130	08/14/2015 0944
Xylenes (total)	100	100		1	101	70-130	08/14/2015 0944
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		100	70-130				
1,2-Dichloroethane-d4		89	70-130				
Toluene-d8		97	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: QH11036-004MS

Matrix: Aqueous

Batch: 82416

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	ND	100	110		1	115	60-140	08/14/2015 1716
Benzene	ND	50	80	N	1	161	70-130	08/14/2015 1716
Bromodichloromethane	ND	50	80	N	1	159	71-143	08/14/2015 1716
Bromoform	ND	50	74	N	1	147	65-131	08/14/2015 1716
Bromomethane (Methyl bromide)	ND	50	83		1	165	36-168	08/14/2015 1716
2-Butanone (MEK)	ND	100	140		1	137	60-140	08/14/2015 1716
Carbon disulfide	ND	50	66		1	133	60-140	08/14/2015 1716
Carbon tetrachloride	ND	50	85	N	1	170	37-166	08/14/2015 1716
Chlorobenzene	ND	50	83	N	1	165	78-129	08/14/2015 1716
Chloroethane	ND	50	85	N	1	171	60-140	08/14/2015 1716
Chloroform	ND	50	73	N	1	146	63-123	08/14/2015 1716
Chloromethane (Methyl chloride)	ND	50	80	N	1	160	20-158	08/14/2015 1716
Cyclohexane	ND	50	78	N	1	156	70-130	08/14/2015 1716
1,2-Dibromo-3-chloropropane (DBCP)	ND	50	76	N	1	153	70-130	08/14/2015 1716
Dibromochloromethane	ND	50	82	N	1	164	74-134	08/14/2015 1716
1,2-Dibromoethane (EDB)	ND	50	83	N	1	166	70-130	08/14/2015 1716
1,2-Dichlorobenzene	ND	50	82	N	1	165	70-130	08/14/2015 1716
1,3-Dichlorobenzene	ND	50	83	N	1	165	70-130	08/14/2015 1716
1,4-Dichlorobenzene	ND	50	81	N	1	163	70-130	08/14/2015 1716
Dichlorodifluoromethane	ND	50	88	N	1	175	10-158	08/14/2015 1716
1,1-Dichloroethane	ND	50	75	N	1	150	69-132	08/14/2015 1716
1,2-Dichloroethane	ND	50	78	N	1	156	70-130	08/14/2015 1716
1,1-Dichloroethene	ND	50	82	N	1	163	50-132	08/14/2015 1716
cis-1,2-Dichloroethene	ND	50	75	N	1	151	70-130	08/14/2015 1716
trans-1,2-Dichloroethene	ND	50	78	N	1	156	70-130	08/14/2015 1716
1,2-Dichloropropane	ND	50	79	N	1	158	71-126	08/14/2015 1716
cis-1,3-Dichloropropene	ND	50	76	N	1	153	69-130	08/14/2015 1716
trans-1,3-Dichloropropene	ND	50	78	N	1	157	73-131	08/14/2015 1716
Ethylbenzene	ND	50	87	N	1	174	70-130	08/14/2015 1716
2-Hexanone	ND	100	160	N	1	155	60-140	08/14/2015 1716
Isopropylbenzene	ND	50	86	N	1	171	70-130	08/14/2015 1716
Methyl acetate	ND	50	58		1	117	15-128	08/14/2015 1716
Methyl tertiary butyl ether (MTBE)	ND	50	71	N	1	143	70-130	08/14/2015 1716
4-Methyl-2-pentanone	ND	100	150	N	1	150	60-140	08/14/2015 1716
Methylcyclohexane	ND	50	83	N	1	167	70-130	08/14/2015 1716
Methylene chloride	ND	50	75	N	1	150	69-129	08/14/2015 1716
Styrene	ND	50	58		1	116	70-130	08/14/2015 1716
1,1,2,2-Tetrachloroethane	ND	50	80	N	1	161	60-155	08/14/2015 1716
Tetrachloroethene	ND	50	91	N	1	183	70-130	08/14/2015 1716
Toluene	ND	50	84	N	1	168	70-130	08/14/2015 1716
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	86	N	1	172	70-130	08/14/2015 1716
1,2,4-Trichlorobenzene	ND	50	82	N	1	164	70-130	08/14/2015 1716
1,1,1-Trichloroethane	ND	50	80	N	1	160	77-132	08/14/2015 1716
1,1,2-Trichloroethane	ND	50	81	N	1	163	77-132	08/14/2015 1716

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: QH11036-004MS

Matrix: Aqueous

Batch: 82416

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	38	50	120	N	1	165	73-124	08/14/2015 1716
Trichlorofluoromethane	ND	50	88	N	1	176	60-140	08/14/2015 1716
Vinyl chloride	ND	50	86	N	1	171	29-159	08/14/2015 1716
Xylenes (total)	ND	100	170	N	1	167	70-130	08/14/2015 1716
Surrogate	Q	% Rec	Acceptance Limit					
1,2-Dichloroethane-d4		86	70-130					
Bromofluorobenzene		98	70-130					
Toluene-d8		93	70-130					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: QH11036-004MD

Matrix: Aqueous

Batch: 82416

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	ND	100	56	N,+	1	56	68	60-140	20	08/14/2015 1738
Benzene	ND	50	39	+	1	78	70	70-130	20	08/14/2015 1738
Bromodichloromethane	ND	50	37	+	1	75	72	71-143	20	08/14/2015 1738
Bromoform	ND	50	33	+	1	65	77	65-131	20	08/14/2015 1738
Bromomethane (Methyl bromide)	ND	50	30	+	1	59	95	36-168	20	08/14/2015 1738
2-Butanone (MEK)	ND	100	64	+	1	64	73	60-140	20	08/14/2015 1738
Carbon disulfide	ND	50	31	+	1	61	74	60-140	20	08/14/2015 1738
Carbon tetrachloride	ND	50	40	+	1	80	72	37-166	20	08/14/2015 1738
Chlorobenzene	ND	50	40	+	1	79	71	78-129	20	08/14/2015 1738
Chloroethane	ND	50	30	+	1	60	97	60-140	20	08/14/2015 1738
Chloroform	ND	50	35	+	1	71	70	63-123	20	08/14/2015 1738
Chloromethane (Methyl chloride)	ND	50	29	+	1	57	95	20-158	20	08/14/2015 1738
Cyclohexane	ND	50	38	+	1	76	69	70-130	20	08/14/2015 1738
1,2-Dibromo-3-chloropropane (DBCP)	ND	50	37	+	1	73	70	70-130	20	08/14/2015 1738
Dibromochloromethane	ND	50	37	+	1	75	75	74-134	20	08/14/2015 1738
1,2-Dibromoethane (EDB)	ND	50	39	+	1	78	72	70-130	20	08/14/2015 1738
1,2-Dichlorobenzene	ND	50	40	+	1	80	69	70-130	20	08/14/2015 1738
1,3-Dichlorobenzene	ND	50	40	+	1	80	69	70-130	20	08/14/2015 1738
1,4-Dichlorobenzene	ND	50	40	+	1	80	69	70-130	20	08/14/2015 1738
Dichlorodifluoromethane	ND	50	31	+	1	62	96	10-158	20	08/14/2015 1738
1,1-Dichloroethane	ND	50	36	+	1	72	70	69-132	20	08/14/2015 1738
1,2-Dichloroethane	ND	50	37	+	1	74	71	70-130	20	08/14/2015 1738
1,1-Dichloroethene	ND	50	39	+	1	78	71	50-132	20	08/14/2015 1738
cis-1,2-Dichloroethene	ND	50	36	+	1	72	70	70-130	20	08/14/2015 1738
trans-1,2-Dichloroethene	ND	50	38	+	1	75	70	70-130	20	08/14/2015 1738
1,2-Dichloropropane	ND	50	37	+	1	75	72	71-126	20	08/14/2015 1738
cis-1,3-Dichloropropene	ND	50	36	+	1	72	72	69-130	20	08/14/2015 1738
trans-1,3-Dichloropropene	ND	50	36	+	1	73	73	73-131	20	08/14/2015 1738
Ethylbenzene	ND	50	40	+	1	81	73	70-130	20	08/14/2015 1738
2-Hexanone	ND	100	72	+	1	72	74	60-140	20	08/14/2015 1738
Isopropylbenzene	ND	50	40	+	1	81	72	70-130	20	08/14/2015 1738
Methyl acetate	ND	50	30	+	1	60	64	15-128	20	08/14/2015 1738
Methyl tertiary butyl ether (MTBE)	ND	50	34	N,+	1	68	71	70-130	20	08/14/2015 1738
4-Methyl-2-pentanone	ND	100	69	+	1	69	73	60-140	20	08/14/2015 1738
Methylcyclohexane	ND	50	41	+	1	82	68	70-130	20	08/14/2015 1738
Methylene chloride	ND	50	36	+	1	71	71	69-129	20	08/14/2015 1738
Styrene	ND	50	16	N,+	1	32	120	70-130	20	08/14/2015 1738
1,1,2,2-Tetrachloroethane	ND	50	38	+	1	77	71	60-155	20	08/14/2015 1738
Tetrachloroethene	ND	50	44	+	1	89	69	70-130	20	08/14/2015 1738
Toluene	ND	50	40	+	1	79	72	70-130	20	08/14/2015 1738
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	42	+	1	84	69	70-130	20	08/14/2015 1738
1,2,4-Trichlorobenzene	ND	50	40	+	1	81	68	70-130	20	08/14/2015 1738
1,1,1-Trichloroethane	ND	50	39	+	1	77	70	77-132	20	08/14/2015 1738
1,1,2-Trichloroethane	ND	50	38	+	1	77	72	77-132	20	08/14/2015 1738

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: QH11036-004MD

Matrix: Aqueous

Batch: 82416

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
Trichloroethene	38	50	78	+	1	80	43	73-124	20	08/14/2015 1738	
Trichlorofluoromethane	ND	50	30	+	1	61	98	60-140	20	08/14/2015 1738	
Vinyl chloride	ND	50	30	+	1	60	97	29-159	20	08/14/2015 1738	
Xylenes (total)	ND	100	76	+	1	76	75	70-130	20	08/14/2015 1738	
Surrogate	Q	% Rec	Acceptance Limit								
1,2-Dichloroethane-d4		87	70-130								
Bromofluorobenzene		99	70-130								
Toluene-d8		94	70-130								

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive
 West Columbia, South Carolina 29172
 Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 110642

Client: **ALCON**
 Address: **101 RESEARCH DR.**
 City: **COLUMBIA**
 State: **SC** Zip Code: **29203**
 Project Name: **SHAKESPEARÉ**
 Project No.: **6032830B.11**

Report to Contact: **SCOTT ROSS**
 Sampler's Signature: *[Signature]*
 Printed Name: **JAMES LEIGHT**

Telephone No. / Fax No. / E-mail: **803 254 4400**
 Scott, Ross @ Alcon.com
 Quote No.:
 Page **1** of **2**

Analysis (Attach list if more space is needed):
MS / MSD

Matrix: **MS / MSD**

Matrix by Preservation Type:
 MS 3
 MSD 9

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	Matrix				No. of Containers by Preservation Type				Sample Disposal <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab	
			MS	MSD	MS	MSD	MS	MSD	MS	MSD		
M12-12	8.10.15	6:15	✓		3							
M12-14	11:05	6:15	✓		3							
M12-15	12:20	6:15	✓		3							
M12-16	13:55	6:15	✓		9							
M12-17	14:55	6:15	✓		3							
M12-13	15:55	6:15	✓		3							
M12-19	8.11.15	10:15	✓		3							
M12-21	11:20	6:15	✓		3							
M12-20	13:28	6:15	✓		3							
TRIP BLANK			✓		2							

Note: All samples are returned for six weeks from receipt unless other arrangements are made.

Turn Around Time Required (Prior lab approval required for expedited TAT):
 Standard Rush (Specify)
 1. Retinquished by: *[Signature]* Date: **8.11.15** Time: **1520**
 2. Retinquished by: *[Signature]* Date: _____ Time: _____
 3. Retinquished by: *[Signature]* Date: **8.11.15** Time: **1520**

Comments: LAB USE ONLY
 Received on site (Circle): Yes No for Pack
 Receipt Temp: **5.7 °C**

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
 Document Number: F-AD-016
 Revision Number: 17

Page 1 of 1
 Replaces Date: 11/07/14
 Effective Date: 04/30/15

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: MEM 11/11/15 Lot #: 0411036

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>157/5.7 °C</u> / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0.0 °C</u>		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/> 18. Were bubbles present > "pea-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 22. Were collection temperatures documented on the COC for NC samples?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input checked="" type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input checked="" type="checkbox"/> 24. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L. (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>MEM</u> Verified by: _____ Date: <u>11/11/15</u>		

MEM 11/11/15
MEM 11/11/15

Comments: _____

Report of Analysis

AECOM

4016 Salt Pointe Parkway
North Charleston, SC 29405
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **60328308.11**

Lot Number: **QH13026**

Date Completed: **08/21/2015**

Date Revised: **08/25/2015**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: QH13026

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Report Revision 08/25/2015

This report is revised to update the Project number.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: QH13026

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-211	Aqueous	08/12/2015 1440	08/13/2015
002	MW-3I	Aqueous	08/12/2015 1605	08/13/2015
003	MW-20I	Aqueous	08/13/2015 1100	08/13/2015
004	MW-20I-A	Aqueous	08/13/2015 1100	08/13/2015
005	TRIP BLANK	Aqueous	08/12/2015	08/13/2015

(5 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: QH13026

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-21I	Aqueous	Acetone	8260B	4.9	J	ug/L	5
001	MW-21I	Aqueous	Chloroform	8260B	1.6	J	ug/L	5
002	MW-3I	Aqueous	Acetone	8260B	2.4	J	ug/L	7
002	MW-3I	Aqueous	Chloroform	8260B	2.2	J	ug/L	7
002	MW-3I	Aqueous	cis-1,2-Dichloroethene	8260B	2.3	J	ug/L	7
002	MW-3I	Aqueous	Tetrachloroethene	8260B	0.25	J	ug/L	7
002	MW-3I	Aqueous	Trichloroethene	8260B	4.8	J	ug/L	8
003	MW-20I	Aqueous	Chloroform	8260B	2.4	J	ug/L	9
003	MW-20I	Aqueous	cis-1,2-Dichloroethene	8260B	6.2	J	ug/L	9
003	MW-20I	Aqueous	Tetrachloroethene	8260B	2.4	J	ug/L	9
003	MW-20I	Aqueous	Trichloroethene	8260B	460		ug/L	10
004	MW-20I-A	Aqueous	Chloroform	8260B	2.7	J	ug/L	11
004	MW-20I-A	Aqueous	cis-1,2-Dichloroethene	8260B	5.9	J	ug/L	11
004	MW-20I-A	Aqueous	Tetrachloroethene	8260B	2.5	J	ug/L	11
004	MW-20I-A	Aqueous	Trichloroethene	8260B	460		ug/L	12
005	TRIP BLANK	Aqueous	Chloromethane (Methyl	8260B	0.21	J	ug/L	13

(16 detections)

Volatile Organic Compounds by GC/MS

 Client: **AECOM**

 Laboratory ID: **QH13026-001**

 Description: **MW-211**

 Matrix: **Aqueous**

 Date Sampled: **08/12/2015 1440**

 Date Received: **08/13/2015**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/19/2015 1512	PAP		82792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	4.9	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	1.6	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit
 B = Detected in the method blank
 E = Quantitation of compound exceeded the calibration range
 H = Out of holding time
 ND = Not detected at or above the MDL
 J = Estimated result < PQL and ≥ MDL
 P = The RPD between two GC columns exceeds 40%
 N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH13026-001
Description: MW-211	Matrix: Aqueous
Date Sampled: 08/12/2015 1440	
Date Received: 08/13/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/19/2015 1512	PAP		82792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		78	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		91	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH13026-002
Description: MW-3I	Matrix: Aqueous
Date Sampled: 08/12/2015 1605	
Date Received: 08/13/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/19/2015 1534	PAP		82792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	2.4	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	2.2	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	2.3	J	5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	0.25	J	5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH13026-002
Description: MW-3I	Matrix: Aqueous
Date Sampled: 08/12/2015 1605	
Date Received: 08/13/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/19/2015 1534	PAP		82792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	4.8	J	5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		74	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		87	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

 Client: **AECOM**

 Laboratory ID: **QH13026-003**

 Description: **MW-20I**

 Matrix: **Aqueous**

 Date Sampled: **08/13/2015 1100**

 Date Received: **08/13/2015**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	08/19/2015 1750	PAP		82792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		100	8.1	ug/L	1
Benzene	71-43-2	8260B	ND		25	1.1	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		25	1.2	ug/L	1
Bromoform	75-25-2	8260B	ND		25	1.8	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	0.95	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	9.1	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		25	2.3	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		25	1.6	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		25	1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		25	1.4	ug/L	1
Chloroform	67-66-3	8260B	2.4	J	25	1.1	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	0.95	ug/L	1
Cyclohexane	110-82-7	8260B	ND		25	1.5	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.8	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		25	1.2	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	0.85	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.3	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	0.95	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	0.95	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		25	4.3	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		25	0.95	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		25	1.2	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		25	1.6	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	6.2	J	25	1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		25	1.7	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		25	1.5	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	1.5	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	1.1	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		25	1.1	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	1.3	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		25	0.70	ug/L	1
Methyl acetate	79-20-9	8260B	ND		25	1.2	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	1.2	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	1.5	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	0.80	ug/L	1
Methylene chloride	75-09-2	8260B	ND		25	2.1	ug/L	1
Styrene	100-42-5	8260B	ND		25	0.65	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	0.65	ug/L	1
Tetrachloroethene	127-18-4	8260B	2.4	J	25	1.1	ug/L	1
Toluene	108-88-3	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	1.5	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	0.65	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	1.1	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH13026-003
Description: MW-20I	Matrix: Aqueous
Date Sampled: 08/13/2015 1100	
Date Received: 08/13/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	08/19/2015 1750	PAP		82792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	460		25	0.80	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		25	3.7	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		10	2.5	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	1.6	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		78	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		89	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH13026-004
Description: MW-20I-A	Matrix: Aqueous
Date Sampled: 08/13/2015 1100	
Date Received: 08/13/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	08/19/2015 1812	PAP		82792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		100	8.1	ug/L	1
Benzene	71-43-2	8260B	ND		25	1.1	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		25	1.2	ug/L	1
Bromoform	75-25-2	8260B	ND		25	1.8	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	0.95	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	9.1	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		25	2.3	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		25	1.6	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		25	1.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		25	1.4	ug/L	1
Chloroform	67-66-3	8260B	2.7	J	25	1.1	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	0.95	ug/L	1
Cyclohexane	110-82-7	8260B	ND		25	1.5	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.8	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		25	1.2	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	0.85	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.3	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	0.95	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	0.95	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		25	4.3	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		25	0.95	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		25	1.2	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		25	1.6	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	5.9	J	25	1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		25	1.7	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		25	1.5	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	1.5	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	1.1	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		25	1.1	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	1.3	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		25	0.70	ug/L	1
Methyl acetate	79-20-9	8260B	ND		25	1.2	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	1.2	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	1.5	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	0.80	ug/L	1
Methylene chloride	75-09-2	8260B	ND		25	2.1	ug/L	1
Styrene	100-42-5	8260B	ND		25	0.65	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	0.65	ug/L	1
Tetrachloroethene	127-18-4	8260B	2.5	J	25	1.1	ug/L	1
Toluene	108-88-3	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	1.5	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	0.65	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	1.2	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	1.1	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH13026-004
Description: MW-20I-A	Matrix: Aqueous
Date Sampled: 08/13/2015 1100	
Date Received: 08/13/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	08/19/2015 1812	PAP		82792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	460		25	0.80	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		25	3.7	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		10	2.5	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	1.6	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		79	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		92	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH13026-005
Description: TRIP BLANK	Matrix: Aqueous
Date Sampled: 08/12/2015	
Date Received: 08/13/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/19/2015 1341	PAP		82792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	0.21	J	5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH13026-005
Description: TRIP BLANK	Matrix: Aqueous
Date Sampled: 08/12/2015	
Date Received: 08/13/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/19/2015 1341	PAP		82792

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		79	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		91	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ82792-001

Matrix: Aqueous

Batch: 82792

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	08/19/2015 1006
Benzene	ND		1	5.0	0.21	ug/L	08/19/2015 1006
Bromodichloromethane	ND		1	5.0	0.23	ug/L	08/19/2015 1006
Bromoform	ND		1	5.0	0.35	ug/L	08/19/2015 1006
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	08/19/2015 1006
2-Butanone (MEK)	ND		1	10	1.8	ug/L	08/19/2015 1006
Carbon disulfide	ND		1	5.0	0.45	ug/L	08/19/2015 1006
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	08/19/2015 1006
Chlorobenzene	ND		1	5.0	0.20	ug/L	08/19/2015 1006
Chloroethane	ND		1	5.0	0.28	ug/L	08/19/2015 1006
Chloroform	ND		1	5.0	0.21	ug/L	08/19/2015 1006
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	08/19/2015 1006
Cyclohexane	ND		1	5.0	0.30	ug/L	08/19/2015 1006
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	08/19/2015 1006
Dibromochloromethane	ND		1	5.0	0.23	ug/L	08/19/2015 1006
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	08/19/2015 1006
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	08/19/2015 1006
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	08/19/2015 1006
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	08/19/2015 1006
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	08/19/2015 1006
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	08/19/2015 1006
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	08/19/2015 1006
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	08/19/2015 1006
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	08/19/2015 1006
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	08/19/2015 1006
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	08/19/2015 1006
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	08/19/2015 1006
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	08/19/2015 1006
Ethylbenzene	ND		1	5.0	0.21	ug/L	08/19/2015 1006
2-Hexanone	ND		1	10	0.26	ug/L	08/19/2015 1006
Isopropylbenzene	ND		1	5.0	0.14	ug/L	08/19/2015 1006
Methyl acetate	ND		1	5.0	0.24	ug/L	08/19/2015 1006
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	08/19/2015 1006
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	08/19/2015 1006
Methylcyclohexane	ND		1	5.0	0.16	ug/L	08/19/2015 1006
Methylene chloride	ND		1	5.0	0.42	ug/L	08/19/2015 1006
Styrene	ND		1	5.0	0.13	ug/L	08/19/2015 1006
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	08/19/2015 1006
Tetrachloroethene	ND		1	5.0	0.22	ug/L	08/19/2015 1006
Toluene	ND		1	5.0	0.24	ug/L	08/19/2015 1006
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	08/19/2015 1006
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	08/19/2015 1006
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	08/19/2015 1006
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	08/19/2015 1006

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ82792-001

Matrix: Aqueous

Batch: 82792

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	08/19/2015 1006
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	08/19/2015 1006
Vinyl chloride	ND		1	2.0	0.50	ug/L	08/19/2015 1006
Xylenes (total)	ND		1	5.0	0.32	ug/L	08/19/2015 1006
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		108	70-130				
1,2-Dichloroethane-d4		78	70-130				
Toluene-d8		90	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ82792-002

Matrix: Aqueous

Batch: 82792

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	104	60-140	08/19/2015 0902
Benzene	50	53		1	106	70-130	08/19/2015 0902
Bromodichloromethane	50	52		1	104	70-130	08/19/2015 0902
Bromoform	50	52		1	104	70-130	08/19/2015 0902
Bromomethane (Methyl bromide)	50	55		1	110	60-140	08/19/2015 0902
2-Butanone (MEK)	100	110		1	109	60-140	08/19/2015 0902
Carbon disulfide	50	62		1	123	60-140	08/19/2015 0902
Carbon tetrachloride	50	58		1	115	70-130	08/19/2015 0902
Chlorobenzene	50	53		1	105	70-130	08/19/2015 0902
Chloroethane	50	53		1	106	42-163	08/19/2015 0902
Chloroform	50	51		1	102	70-130	08/19/2015 0902
Chloromethane (Methyl chloride)	50	55		1	111	60-140	08/19/2015 0902
Cyclohexane	50	58		1	117	70-130	08/19/2015 0902
1,2-Dibromo-3-chloropropane (DBCP)	50	46		1	93	70-130	08/19/2015 0902
Dibromochloromethane	50	52		1	103	70-130	08/19/2015 0902
1,2-Dibromoethane (EDB)	50	52		1	104	70-130	08/19/2015 0902
1,4-Dichlorobenzene	50	52		1	103	70-130	08/19/2015 0902
1,2-Dichlorobenzene	50	54		1	108	70-130	08/19/2015 0902
1,3-Dichlorobenzene	50	53		1	106	70-130	08/19/2015 0902
Dichlorodifluoromethane	50	62		1	124	60-140	08/19/2015 0902
1,2-Dichloroethane	50	53		1	107	70-130	08/19/2015 0902
1,1-Dichloroethane	50	54		1	108	70-130	08/19/2015 0902
1,1-Dichloroethene	50	57		1	113	70-130	08/19/2015 0902
trans-1,2-Dichloroethene	50	55		1	111	70-130	08/19/2015 0902
cis-1,2-Dichloroethene	50	55		1	110	70-130	08/19/2015 0902
1,2-Dichloropropane	50	52		1	103	70-130	08/19/2015 0902
cis-1,3-Dichloropropene	50	52		1	105	70-130	08/19/2015 0902
trans-1,3-Dichloropropene	50	51		1	103	70-130	08/19/2015 0902
Ethylbenzene	50	53		1	106	70-130	08/19/2015 0902
2-Hexanone	100	100		1	102	60-140	08/19/2015 0902
Isopropylbenzene	50	55		1	110	70-130	08/19/2015 0902
Methyl acetate	50	61		1	122	60-140	08/19/2015 0902
Methyl tertiary butyl ether (MTBE)	50	54		1	109	70-130	08/19/2015 0902
4-Methyl-2-pentanone	100	100		1	102	60-140	08/19/2015 0902
Methylcyclohexane	50	56		1	113	70-130	08/19/2015 0902
Methylene chloride	50	52		1	105	70-130	08/19/2015 0902
Styrene	50	53		1	106	70-130	08/19/2015 0902
1,1,2,2-Tetrachloroethane	50	51		1	102	70-130	08/19/2015 0902
Tetrachloroethene	50	52		1	104	70-130	08/19/2015 0902
Toluene	50	53		1	107	70-130	08/19/2015 0902
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	58		1	116	70-130	08/19/2015 0902
1,2,4-Trichlorobenzene	50	51		1	103	70-130	08/19/2015 0902
1,1,1-Trichloroethane	50	56		1	112	70-130	08/19/2015 0902
1,1,2-Trichloroethane	50	51		1	103	70-130	08/19/2015 0902

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ82792-002

Matrix: Aqueous

Batch: 82792

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	54		1	108	70-130	08/19/2015 0902
Trichlorofluoromethane	50	55		1	110	70-130	08/19/2015 0902
Vinyl chloride	50	55		1	109	70-130	08/19/2015 0902
Xylenes (total)	100	110		1	106	70-130	08/19/2015 0902
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		108	70-130				
1,2-Dichloroethane-d4		75	70-130				
Toluene-d8		92	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

SHEALY ENVIRONMENTAL SERVICES, INC.

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 49355

SHEALY Chain of Custody Record

Client AFCOM Address 101 Research Drive Columbia, SC 29203 Project Name Shakespear	Report to Contact Scott Ross Sampler's Signature  Project Name Justin Butler	Telephone No. / E-mail 803-254-4400 Scott.Ross@AFCOM.com Analysis (Attach list if more space is necessary)	Quota No. Page 1 of 1  QH13026 Remarks / Cooler I.D.
Project No. 50328308 Sample ID / Description (Containers for each script may be combined on one line.)	P.O. No. Date Time	Matrix Type Vol No. of Containers by Preservative Type None Acid Alkaline Other	Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown
MW-21E MW-30E MW-30E MW-30E Trip Back	8/12/15 8/12/15 8/13/15 8/13/15 —	6 X 6 X 6 X 6 X X	3 3 3 3 2
Turn Around Time Required (Prior lab approval required for expedited TAT.) <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)		Sample Disposal <input type="checkbox"/> Return to Client <input type="checkbox"/> Deposal by Lab	
1. Relinquished by 	Date 8/13/15 Time 1340	QC Requirements (Specify) Date Time Date Time Date Time	
2. Relinquished by	Date Time Date Time	8-13-15 1240	
3. Relinquished by	Date Time	Received on ice (Circle) <input checked="" type="checkbox"/> No <input type="checkbox"/> Ice Pack <input type="checkbox"/> Recept Temp. 2.7 °C	
4. Relinquished by	Date Time	Note: All samples are retained for four weeks from receipt unless other arrangements are made.	

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
 Document Number: F-AD-016
 Revision Number: 17

Page 1 of 1
 Replaces Date: 11/07/14
 Effective Date: 04/30/15

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: JES / 8/13/15 Lot #: AH13026

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>12.7 / 2.7</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/> 18. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 23. Were client remarks/rcqusts (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	16934 24. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>JES</u> Verified by: _____ Date: <u>8/13/15</u>		

Comments:

Report of Analysis

AECOM

4016 Salt Pointe Parkway
North Charleston, SC 29405
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **60328308.11**

Lot Number: **QH18021**

Date Completed: **08/25/2015**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: QH18021

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: QH18021

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW2I(55')	Aqueous	08/18/2015 0905	08/18/2015

(1 sample)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: QH18021

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW2I(55')	Aqueous	Acetone	8260B	13	J	ug/L	5
001	MW2I(55')	Aqueous	Chloroform	8260B	18	B	ug/L	5
001	MW2I(55')	Aqueous	Methylene chloride	8260B	2.2	J	ug/L	6
001	MW2I(55')	Aqueous	Trichloroethene	8260B	6.2		ug/L	6

(4 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH18021-001
Description: MW2I(55')	Matrix: Aqueous
Date Sampled: 08/18/2015 0905	
Date Received: 08/18/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/22/2015 0459	JJG		83151

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	13	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	18	B	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	2.2	J	5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,1,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QH18021-001
Description: MW2I(55')	Matrix: Aqueous
Date Sampled: 08/18/2015 0905	
Date Received: 08/18/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	08/22/2015 0459	JJG		83151

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	6.2		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		110	70-130
Bromofluorobenzene		100	70-130
Toluene-d8		106	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ83151-001

Matrix: Aqueous

Batch 83151

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	08/21/2015 2112
Benzene	ND		1	5.0	0.21	ug/L	08/21/2015 2112
Bromodichloromethane	ND		1	5.0	0.23	ug/L	08/21/2015 2112
Bromoform	ND		1	5.0	0.35	ug/L	08/21/2015 2112
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	08/21/2015 2112
2-Butanone (MEK)	ND		1	10	1.8	ug/L	08/21/2015 2112
Carbon disulfide	ND		1	5.0	0.45	ug/L	08/21/2015 2112
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	08/21/2015 2112
Chlorobenzene	ND		1	5.0	0.20	ug/L	08/21/2015 2112
Chloroethane	ND		1	5.0	0.28	ug/L	08/21/2015 2112
Chloroform	0.21	J	1	5.0	0.21	ug/L	08/21/2015 2112
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	08/21/2015 2112
Cyclohexane	ND		1	5.0	0.30	ug/L	08/21/2015 2112
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	08/21/2015 2112
Dibromochloromethane	ND		1	5.0	0.23	ug/L	08/21/2015 2112
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	08/21/2015 2112
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	08/21/2015 2112
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	08/21/2015 2112
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	08/21/2015 2112
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	08/21/2015 2112
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	08/21/2015 2112
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	08/21/2015 2112
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	08/21/2015 2112
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	08/21/2015 2112
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	08/21/2015 2112
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	08/21/2015 2112
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	08/21/2015 2112
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	08/21/2015 2112
Ethylbenzene	ND		1	5.0	0.21	ug/L	08/21/2015 2112
2-Hexanone	ND		1	10	0.26	ug/L	08/21/2015 2112
Isopropylbenzene	ND		1	5.0	0.14	ug/L	08/21/2015 2112
Methyl acetate	ND		1	5.0	0.24	ug/L	08/21/2015 2112
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	08/21/2015 2112
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	08/21/2015 2112
Methylcyclohexane	ND		1	5.0	0.16	ug/L	08/21/2015 2112
Methylene chloride	ND		1	5.0	0.42	ug/L	08/21/2015 2112
Styrene	ND		1	5.0	0.13	ug/L	08/21/2015 2112
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	08/21/2015 2112
Tetrachloroethene	ND		1	5.0	0.22	ug/L	08/21/2015 2112
Toluene	ND		1	5.0	0.24	ug/L	08/21/2015 2112
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	08/21/2015 2112
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	08/21/2015 2112
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	08/21/2015 2112
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	08/21/2015 2112

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ83151-001

Matrix: Aqueous

Batch: 83151

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	08/21/2015 2112
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	08/21/2015 2112
Vinyl chloride	ND		1	2.0	0.50	ug/L	08/21/2015 2112
Xylenes (total)	ND		1	5.0	0.32	ug/L	08/21/2015 2112
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		100	70-130				
1,2-Dichloroethane-d4		109	70-130				
Toluene-d8		105	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ83151-002

Matrix: Aqueous

Batch: 83151

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	84		1	84	60-140	08/21/2015 2015
Benzene	50	53		1	105	70-130	08/21/2015 2015
Bromodichloromethane	50	56		1	112	70-130	08/21/2015 2015
Bromoform	50	58		1	117	70-130	08/21/2015 2015
Bromomethane (Methyl bromide)	50	50		1	100	60-140	08/21/2015 2015
2-Butanone (MEK)	100	87		1	87	60-140	08/21/2015 2015
Carbon disulfide	50	50		1	101	60-140	08/21/2015 2015
Carbon tetrachloride	50	57		1	114	70-130	08/21/2015 2015
Chlorobenzene	50	54		1	108	70-130	08/21/2015 2015
Chloroethane	50	51		1	101	42-163	08/21/2015 2015
Chloroform	50	46		1	92	70-130	08/21/2015 2015
Chloromethane (Methyl chloride)	50	53		1	107	60-140	08/21/2015 2015
Cyclohexane	50	54		1	108	70-130	08/21/2015 2015
1,2-Dibromo-3-chloropropane (DBCP)	50	52		1	104	70-130	08/21/2015 2015
Dibromochloromethane	50	56		1	113	70-130	08/21/2015 2015
1,2-Dibromoethane (EDB)	50	54		1	107	70-130	08/21/2015 2015
1,4-Dichlorobenzene	50	54		1	109	70-130	08/21/2015 2015
1,2-Dichlorobenzene	50	54		1	107	70-130	08/21/2015 2015
1,3-Dichlorobenzene	50	57		1	114	70-130	08/21/2015 2015
Dichlorodifluoromethane	50	60		1	120	60-140	08/21/2015 2015
1,2-Dichloroethane	50	55		1	111	70-130	08/21/2015 2015
1,1-Dichloroethane	50	50		1	100	70-130	08/21/2015 2015
cis-1,2-Dichloroethene	50	49		1	99	70-130	08/21/2015 2015
trans-1,2-Dichloroethene	50	51		1	101	70-130	08/21/2015 2015
1,1-Dichloroethene	50	51		1	102	70-130	08/21/2015 2015
1,2-Dichloropropane	50	53		1	105	70-130	08/21/2015 2015
trans-1,3-Dichloropropene	50	59		1	117	70-130	08/21/2015 2015
cis-1,3-Dichloropropene	50	58		1	117	70-130	08/21/2015 2015
Ethylbenzene	50	55		1	110	70-130	08/21/2015 2015
2-Hexanone	100	110		1	112	60-140	08/21/2015 2015
Isopropylbenzene	50	58		1	115	70-130	08/21/2015 2015
Methyl acetate	50	52		1	104	60-140	08/21/2015 2015
Methyl tertiary butyl ether (MTBE)	50	47		1	94	70-130	08/21/2015 2015
4-Methyl-2-pentanone	100	110		1	105	60-140	08/21/2015 2015
Methylcyclohexane	50	57		1	114	70-130	08/21/2015 2015
Methylene chloride	50	48		1	96	70-130	08/21/2015 2015
Styrene	50	57		1	113	70-130	08/21/2015 2015
1,1,2,2-Tetrachloroethane	50	52		1	104	70-130	08/21/2015 2015
Tetrachloroethene	50	56		1	111	70-130	08/21/2015 2015
Toluene	50	54		1	109	70-130	08/21/2015 2015
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	52		1	104	70-130	08/21/2015 2015
1,2,4-Trichlorobenzene	50	59		1	117	70-130	08/21/2015 2015
1,1,1-Trichloroethane	50	54		1	107	70-130	08/21/2015 2015
1,1,2-Trichloroethane	50	53		1	106	70-130	08/21/2015 2015

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ83151-002

Matrix: Aqueous

Batch: 83151

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	53		1	106	70-130	08/21/2015 2015
Trichlorofluoromethane	50	54		1	109	70-130	08/21/2015 2015
Vinyl chloride	50	49		1	99	70-130	08/21/2015 2015
Xylenes (total)	100	110		1	111	70-130	08/21/2015 2015
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		103	70-130				
1,2-Dichloroethane-d4		99	70-130				
Toluene-d8		107	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 51326

Chain of Custody Record



Client AECOM	Report to Contact Scott Cross	Telephone No. / E-mail (803) 254-1400 / scotcross@aecom.com	Quote No.
Address 101 Research Drive		Analysis (Attach list if more space is needed)	
City Cola	State SC	Zip Code 29203	Page 1 of 1
Project Name Shakespeare - Newberry		QH18021	
Project No. 60378308	P.O. No.		
Sample ID / Description MW 2 I (55')		Date 8/19/15 0905	
(Continue for each sample; may be combined on one line.)			
Matrix		No of Containers by Preservative Type	
<input checked="" type="checkbox"/> Air <input type="checkbox"/> Bulk <input type="checkbox"/> Soil <input type="checkbox"/> Sludge <input type="checkbox"/> Water		<input type="checkbox"/> AOC <input type="checkbox"/> HCL <input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> Other	
Date/Time 8/19/15 0905		Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	
Sample Disposal <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab		OC Requirements (Specify)	
1. Relinquished by Scott Cross		Date 8/18/15 Time 1157	
2. Relinquished by		Date Time	
3. Relinquished by		Date Time	
4. Relinquished by		Date 8-18-15 Time 1157	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.			
LAB USE ONLY Received on ice (Circle) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Receipt Temp. 35 °C	

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
 Document Number: F-AD-016
 Revision Number: 17

Page 1 of 1
 Replaces Date: 11/07/14
 Effective Date: 04/30/15

Sample Receipt Checklist (SRC)

Client: Aecom Cooler Inspected by/date: KWP 8-18-15 Lot #: QH18001

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>135 / 35 °C</u> / <u> </u> / <u> </u> / <u> </u> / <u> </u> °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	18. Were bubbles present > "pea-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>KWP</u> Verified by: _____ Date: <u>8-18-15</u>		

Comments:

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **60328308.11**

Lot Number: **QI11015**

Date Completed: **09/17/2015**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: QI11015

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: QI11015

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-18D	Aqueous	09/11/2015 0835	09/11/2015

(1 sample)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: QI11015

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-18D	Aqueous	Acetone	8260B	4.9	J	ug/L	5
001	MW-18D	Aqueous	Carbon disulfide	8260B	0.52	J	ug/L	5
001	MW-18D	Aqueous	Chloroform	8260B	0.45	J	ug/L	5
001	MW-18D	Aqueous	Trichloroethene	8260B	74		ug/L	6

(4 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QI11015-001
Description: MW-18D	Matrix: Aqueous
Date Sampled: 09/11/2015 0835	
Date Received: 09/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/16/2015 2120	PAP		85098

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	4.9	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	0.52	J	5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	0.45	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QI11015-001
Description: MW-18D	Matrix: Aqueous
Date Sampled: 09/11/2015 0835	
Date Received: 09/11/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/16/2015 2120	PAP		85098

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	74		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		80	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		90	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ85098-001

Matrix: Aqueous

Batch: 85098

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	09/16/2015 1758
Benzene	ND		1	5.0	0.21	ug/L	09/16/2015 1758
Bromodichloromethane	ND		1	5.0	0.23	ug/L	09/16/2015 1758
Bromoform	ND		1	5.0	0.35	ug/L	09/16/2015 1758
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	09/16/2015 1758
2-Butanone (MEK)	ND		1	10	1.8	ug/L	09/16/2015 1758
Carbon disulfide	ND		1	5.0	0.45	ug/L	09/16/2015 1758
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	09/16/2015 1758
Chlorobenzene	ND		1	5.0	0.20	ug/L	09/16/2015 1758
Chloroethane	ND		1	5.0	0.28	ug/L	09/16/2015 1758
Chloroform	ND		1	5.0	0.21	ug/L	09/16/2015 1758
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	09/16/2015 1758
Cyclohexane	ND		1	5.0	0.30	ug/L	09/16/2015 1758
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	09/16/2015 1758
Dibromochloromethane	ND		1	5.0	0.23	ug/L	09/16/2015 1758
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	09/16/2015 1758
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	09/16/2015 1758
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	09/16/2015 1758
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	09/16/2015 1758
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	09/16/2015 1758
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	09/16/2015 1758
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	09/16/2015 1758
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	09/16/2015 1758
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	09/16/2015 1758
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	09/16/2015 1758
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	09/16/2015 1758
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	09/16/2015 1758
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	09/16/2015 1758
Ethylbenzene	ND		1	5.0	0.21	ug/L	09/16/2015 1758
2-Hexanone	ND		1	10	0.26	ug/L	09/16/2015 1758
Isopropylbenzene	ND		1	5.0	0.14	ug/L	09/16/2015 1758
Methyl acetate	ND		1	5.0	0.24	ug/L	09/16/2015 1758
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	09/16/2015 1758
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	09/16/2015 1758
Methylcyclohexane	ND		1	5.0	0.16	ug/L	09/16/2015 1758
Methylene chloride	ND		1	5.0	0.42	ug/L	09/16/2015 1758
Styrene	ND		1	5.0	0.13	ug/L	09/16/2015 1758
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	09/16/2015 1758
Tetrachloroethene	ND		1	5.0	0.22	ug/L	09/16/2015 1758
Toluene	ND		1	5.0	0.24	ug/L	09/16/2015 1758
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	09/16/2015 1758
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	09/16/2015 1758
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	09/16/2015 1758
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	09/16/2015 1758

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ85098-001

Matrix: Aqueous

Batch: 85098

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	09/16/2015 1758
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	09/16/2015 1758
Vinyl chloride	ND		1	2.0	0.50	ug/L	09/16/2015 1758
Xylenes (total)	ND		1	5.0	0.32	ug/L	09/16/2015 1758
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		97	70-130				
1,2-Dichloroethane-d4		81	70-130				
Toluene-d8		88	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ85098-002

Matrix: Aqueous

Batch: 85098

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	68		1	68	60-140	09/16/2015 1700
Benzene	50	51		1	102	70-130	09/16/2015 1700
Bromodichloromethane	50	51		1	103	70-130	09/16/2015 1700
Bromoform	50	54		1	108	70-130	09/16/2015 1700
Bromomethane (Methyl bromide)	50	50		1	100	60-140	09/16/2015 1700
2-Butanone (MEK)	100	92		1	92	60-140	09/16/2015 1700
Carbon disulfide	50	50		1	100	60-140	09/16/2015 1700
Carbon tetrachloride	50	55		1	110	70-130	09/16/2015 1700
Chlorobenzene	50	52		1	104	70-130	09/16/2015 1700
Chloroethane	50	49		1	97	60-140	09/16/2015 1700
Chloroform	50	47		1	93	70-130	09/16/2015 1700
Chloromethane (Methyl chloride)	50	51		1	103	60-140	09/16/2015 1700
Cyclohexane	50	53		1	106	70-130	09/16/2015 1700
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	96	70-130	09/16/2015 1700
Dibromochloromethane	50	49		1	99	70-130	09/16/2015 1700
1,2-Dibromoethane (EDB)	50	54		1	108	70-130	09/16/2015 1700
1,2-Dichlorobenzene	50	50		1	101	70-130	09/16/2015 1700
1,4-Dichlorobenzene	50	51		1	102	70-130	09/16/2015 1700
1,3-Dichlorobenzene	50	52		1	104	70-130	09/16/2015 1700
Dichlorodifluoromethane	50	60		1	120	60-140	09/16/2015 1700
1,2-Dichloroethane	50	48		1	97	70-130	09/16/2015 1700
1,1-Dichloroethane	50	52		1	103	70-130	09/16/2015 1700
trans-1,2-Dichloroethene	50	53		1	106	70-130	09/16/2015 1700
1,1-Dichloroethene	50	55		1	110	70-130	09/16/2015 1700
cis-1,2-Dichloroethene	50	50		1	100	70-130	09/16/2015 1700
1,2-Dichloropropane	50	51		1	101	70-130	09/16/2015 1700
trans-1,3-Dichloropropene	50	50		1	100	70-130	09/16/2015 1700
cis-1,3-Dichloropropene	50	49		1	99	70-130	09/16/2015 1700
Ethylbenzene	50	53		1	107	70-130	09/16/2015 1700
2-Hexanone	100	110		1	111	60-140	09/16/2015 1700
Isopropylbenzene	50	54		1	108	70-130	09/16/2015 1700
Methyl acetate	50	43		1	86	60-140	09/16/2015 1700
Methyl tertiary butyl ether (MTBE)	50	50		1	101	70-130	09/16/2015 1700
4-Methyl-2-pentanone	100	98		1	98	60-140	09/16/2015 1700
Methylcyclohexane	50	59		1	118	70-130	09/16/2015 1700
Methylene chloride	50	47		1	93	70-130	09/16/2015 1700
Styrene	50	48		1	96	70-130	09/16/2015 1700
1,1,2,2-Tetrachloroethane	50	53		1	106	70-130	09/16/2015 1700
Tetrachloroethene	50	54		1	109	70-130	09/16/2015 1700
Toluene	50	55		1	109	70-130	09/16/2015 1700
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	55		1	110	70-130	09/16/2015 1700
1,2,4-Trichlorobenzene	50	55		1	110	70-130	09/16/2015 1700
1,1,2-Trichloroethane	50	52		1	103	70-130	09/16/2015 1700
1,1,1-Trichloroethane	50	52		1	105	70-130	09/16/2015 1700

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ85098-002

Matrix: Aqueous

Batch: 85098

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	53		1	106	70-130	09/16/2015 1700
Trichlorofluoromethane	50	54		1	109	70-130	09/16/2015 1700
Vinyl chloride	50	55		1	110	70-130	09/16/2015 1700
Xylenes (total)	100	110		1	106	70-130	09/16/2015 1700
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		99	70-130				
1,2-Dichloroethane-d4		75	70-130				
Toluene-d8		91	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR# _____
 GAS Contract _____

PAGE 1 OF 1

Project Name SHAKESPEAR Project Manager SCOTT ROSS Company Address ARCAM 101 Research Dr. Columbia SC 29203		Project Number 6032830811 Email Address SCOTT.ROSS@ARCAM.COM		ANALYSIS REQUESTED (Include Method Number and C) PRESERVATIVE 1 NUMBER OF CONTAINERS 3		QR Code  QI11015	
Phone # 803 754 4400		FAX # _____		REMARKS ALTERNATE DESCRIPTION _____ _____ _____		Silver Key IE 2. mNO ₃ 3. H ₂ SO ₄ 4. NaOH 5. Zn Acetate 6. MeOH 7. NaHSO ₄ 8. Other _____	
Client Sample ID MCS-18D		LAB ID _____		MATRIX GL		REPORT REQUIREMENTS I. Results Only _____ II. Results + QC Summaries (DUP, DUP, INCREASED as required) _____ III. Results + QC and Calibration Summaries _____ IV. Data Validation Report with Raw Data _____ V. Specialized Forms / Custom Report _____ Extra Yes _____ No _____	
Sample's Signature James Leaphart		Sampling Date 9-11-15		Sampling Time 0835		RECEIVED BY Signature James Leaphart Printed Name James Leaphart Firm ARCAM Date/Time 9-11-15 11:43	
SPECIAL INSTRUCTIONS/COMMENTS _____ _____ _____		TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) _____ STANDARD <input checked="" type="checkbox"/> _____ REQUESTED FAX DATE _____ REQUESTED REPORT DATE _____		RECEIVED BY Signature _____ Printed Name _____ Firm _____ Date/Time _____		INVOICE INFORMATION PO # _____ BILL TO: _____	
SIM/DAPP <input type="checkbox"/>		SAMPLE RECEIPT: CONDITION/COOLER TEMP: RELINQUISHED BY Signature James Leaphart Printed Name James Leaphart Firm ARCAM Date/Time 9-11-15 11:43		CUSTODY SEALS: Y N RELINQUISHED BY Signature _____ Printed Name _____ Firm _____ Date/Time _____		RECEIVED BY Signature _____ Printed Name _____ Firm _____ Date/Time _____	

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
 Document Number: F-AD-016
 Revision Number: 17

Page 1 of 1
 Replaces Date: 11/07/14
 Effective Date: 04/30/15

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: MEM/9/11/15 Lot #: 0111015

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>10.1/10.1</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0.6</u> °C		
Method of coolant: <input type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input checked="" type="checkbox"/> None		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/> 3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by <u>SRC</u> phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/> 18. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 24. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>MEM</u> Verified by: _____ Date: <u>9/11/15</u>		

MEM/9/11/15

Comments:

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **60327308**

Lot Number: **QI17060**

Date Completed: **09/28/2015**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: Q117060

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: QI17060

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	SW-1(2)	Aqueous	09/17/2015 1045	09/17/2015
002	SW-2(2)	Aqueous	09/17/2015 1115	09/17/2015
003	SW-3(2)	Aqueous	09/17/2015 1140	09/17/2015
004	TRIP BLANK	Aqueous	09/17/2015	09/17/2015

(4 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: QI17060

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	SW-1(2)	Aqueous	Acetone	8260B	3.7	J	ug/L	5
001	SW-1(2)	Aqueous	cis-1,2-Dichloroethene	8260B	0.52	J	ug/L	5
002	SW-2(2)	Aqueous	Acetone	8260B	2.6	J	ug/L	7
002	SW-2(2)	Aqueous	cis-1,2-Dichloroethene	8260B	6.3		ug/L	7
002	SW-2(2)	Aqueous	Toluene	8260B	0.38	J	ug/L	7
002	SW-2(2)	Aqueous	Trichloroethene	8260B	0.92	J	ug/L	8
003	SW-3(2)	Aqueous	Acetone	8260B	2.9	J	ug/L	9
003	SW-3(2)	Aqueous	Chloromethane (Methyl	8260B	0.24	J	ug/L	9

(8 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QI17060-001
Description: SW-1(2)	Matrix: Aqueous
Date Sampled: 09/17/2015 1045	
Date Received: 09/17/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/25/2015 1650	SES		85803

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	3.7	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	0.52	J	5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: Q117060-001
Description: SW-1(2)	Matrix: Aqueous
Date Sampled: 09/17/2015 1045	
Date Received: 09/17/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/25/2015 1650	SES		85803

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		91	70-130
Bromofluorobenzene		109	70-130
Toluene-d8		83	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QI17060-002
Description: SW-2(2)	Matrix: Aqueous
Date Sampled: 09/17/2015 1115	
Date Received: 09/17/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/25/2015 1712	SES		85803

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	2.6	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	6.3		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	0.38	J	5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: Q117060-002
Description: SW-2(2)	Matrix: Aqueous
Date Sampled: 09/17/2015 1115	
Date Received: 09/17/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/25/2015 1712	SES		85803

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	0.92	J	5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		91	70-130
Bromofluorobenzene		107	70-130
Toluene-d8		83	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QI17060-003
Description: SW-3(2)	Matrix: Aqueous
Date Sampled: 09/17/2015 1140	
Date Received: 09/17/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/25/2015 1735	SES		85803

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	2.9	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	0.24	J	5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: Q117060-003
Description: SW-3(2)	Matrix: Aqueous
Date Sampled: 09/17/2015 1140	
Date Received: 09/17/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/25/2015 1735	SES		85803

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		82	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QI17060-004
Description: TRIP BLANK	Matrix: Aqueous
Date Sampled: 09/17/2015	
Date Received: 09/17/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/25/2015 1215	SES		85803

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: Q117060-004
Description: TRIP BLANK	Matrix: Aqueous
Date Sampled: 09/17/2015	
Date Received: 09/17/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/25/2015 1215	SES		85803

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		91	70-130
Bromofluorobenzene		109	70-130
Toluene-d8		84	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ85803-001

Matrix: Aqueous

Batch: 85803

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	09/25/2015 1055
Benzene	ND		1	5.0	0.21	ug/L	09/25/2015 1055
Bromodichloromethane	ND		1	5.0	0.23	ug/L	09/25/2015 1055
Bromoform	ND		1	5.0	0.35	ug/L	09/25/2015 1055
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	09/25/2015 1055
2-Butanone (MEK)	ND		1	10	1.8	ug/L	09/25/2015 1055
Carbon disulfide	ND		1	5.0	0.45	ug/L	09/25/2015 1055
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	09/25/2015 1055
Chlorobenzene	ND		1	5.0	0.20	ug/L	09/25/2015 1055
Chloroethane	ND		1	5.0	0.28	ug/L	09/25/2015 1055
Chloroform	ND		1	5.0	0.21	ug/L	09/25/2015 1055
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	09/25/2015 1055
Cyclohexane	ND		1	5.0	0.30	ug/L	09/25/2015 1055
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	09/25/2015 1055
Dibromochloromethane	ND		1	5.0	0.23	ug/L	09/25/2015 1055
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	09/25/2015 1055
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	09/25/2015 1055
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	09/25/2015 1055
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	09/25/2015 1055
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	09/25/2015 1055
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	09/25/2015 1055
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	09/25/2015 1055
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	09/25/2015 1055
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	09/25/2015 1055
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	09/25/2015 1055
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	09/25/2015 1055
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	09/25/2015 1055
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	09/25/2015 1055
Ethylbenzene	ND		1	5.0	0.21	ug/L	09/25/2015 1055
2-Hexanone	ND		1	10	0.26	ug/L	09/25/2015 1055
Isopropylbenzene	ND		1	5.0	0.14	ug/L	09/25/2015 1055
Methyl acetate	ND		1	5.0	0.24	ug/L	09/25/2015 1055
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	09/25/2015 1055
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	09/25/2015 1055
Methylcyclohexane	ND		1	5.0	0.16	ug/L	09/25/2015 1055
Methylene chloride	ND		1	5.0	0.42	ug/L	09/25/2015 1055
Styrene	ND		1	5.0	0.13	ug/L	09/25/2015 1055
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	09/25/2015 1055
Tetrachloroethene	ND		1	5.0	0.22	ug/L	09/25/2015 1055
Toluene	ND		1	5.0	0.24	ug/L	09/25/2015 1055
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	09/25/2015 1055
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	09/25/2015 1055
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	09/25/2015 1055
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	09/25/2015 1055

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ85803-001

Matrix: Aqueous

Batch: 85803

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	09/25/2015 1055
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	09/25/2015 1055
Vinyl chloride	ND		1	2.0	0.50	ug/L	09/25/2015 1055
Xylenes (total)	ND		1	5.0	0.32	ug/L	09/25/2015 1055
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		112	70-130				
1,2-Dichloroethane-d4		92	70-130				
Toluene-d8		84	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ85803-002

Matrix: Aqueous

Batch: 85803

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	114	60-140	09/25/2015 0917
Benzene	50	54		1	108	70-130	09/25/2015 0917
Bromodichloromethane	50	56		1	112	70-130	09/25/2015 0917
Bromoform	50	47		1	94	70-130	09/25/2015 0917
Bromomethane (Methyl bromide)	50	53		1	106	60-140	09/25/2015 0917
2-Butanone (MEK)	100	120		1	118	60-140	09/25/2015 0917
Carbon disulfide	50	50		1	101	60-140	09/25/2015 0917
Carbon tetrachloride	50	56		1	112	70-130	09/25/2015 0917
Chlorobenzene	50	53		1	107	70-130	09/25/2015 0917
Chloroethane	50	54		1	107	60-140	09/25/2015 0917
Chloroform	50	50		1	99	70-130	09/25/2015 0917
Chloromethane (Methyl chloride)	50	51		1	103	60-140	09/25/2015 0917
Cyclohexane	50	52		1	105	70-130	09/25/2015 0917
1,2-Dibromo-3-chloropropane (DBCP)	50	57		1	114	70-130	09/25/2015 0917
Dibromochloromethane	50	48		1	97	70-130	09/25/2015 0917
1,2-Dibromoethane (EDB)	50	55		1	111	70-130	09/25/2015 0917
1,4-Dichlorobenzene	50	52		1	104	70-130	09/25/2015 0917
1,3-Dichlorobenzene	50	52		1	105	70-130	09/25/2015 0917
1,2-Dichlorobenzene	50	52		1	103	70-130	09/25/2015 0917
Dichlorodifluoromethane	50	53		1	105	60-140	09/25/2015 0917
1,2-Dichloroethane	50	54		1	107	70-130	09/25/2015 0917
1,1-Dichloroethane	50	56		1	111	70-130	09/25/2015 0917
trans-1,2-Dichloroethene	50	55		1	111	70-130	09/25/2015 0917
cis-1,2-Dichloroethene	50	56		1	113	70-130	09/25/2015 0917
1,1-Dichloroethene	50	54		1	107	70-130	09/25/2015 0917
1,2-Dichloropropane	50	57		1	114	70-130	09/25/2015 0917
trans-1,3-Dichloropropene	50	55		1	111	70-130	09/25/2015 0917
cis-1,3-Dichloropropene	50	61		1	122	70-130	09/25/2015 0917
Ethylbenzene	50	56		1	112	70-130	09/25/2015 0917
2-Hexanone	100	120		1	116	60-140	09/25/2015 0917
Isopropylbenzene	50	56		1	112	70-130	09/25/2015 0917
Methyl acetate	50	66		1	131	60-140	09/25/2015 0917
Methyl tertiary butyl ether (MTBE)	50	62		1	124	70-130	09/25/2015 0917
4-Methyl-2-pentanone	100	120		1	125	60-140	09/25/2015 0917
Methylcyclohexane	50	53		1	105	70-130	09/25/2015 0917
Methylene chloride	50	52		1	105	70-130	09/25/2015 0917
Styrene	50	60		1	119	70-130	09/25/2015 0917
1,1,2,2-Tetrachloroethane	50	52		1	104	70-130	09/25/2015 0917
Tetrachloroethene	50	52		1	103	70-130	09/25/2015 0917
Toluene	50	54		1	108	70-130	09/25/2015 0917
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	55		1	110	70-130	09/25/2015 0917
1,2,4-Trichlorobenzene	50	61		1	121	70-130	09/25/2015 0917
1,1,2-Trichloroethane	50	52		1	103	70-130	09/25/2015 0917
1,1,1-Trichloroethane	50	55		1	109	70-130	09/25/2015 0917

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ85803-002

Matrix: Aqueous

Batch: 85803

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	52		1	105	70-130	09/25/2015 0917
Trichlorofluoromethane	50	49		1	98	70-130	09/25/2015 0917
Vinyl chloride	50	52		1	104	70-130	09/25/2015 0917
Xylenes (total)	100	110		1	113	70-130	09/25/2015 0917
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		108	70-130				
1,2-Dichloroethane-d4		88	70-130				
Toluene-d8		86	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**



Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 52949

Client AELSON Address 1-1 RESERVICHT DR City Columbia State SC Zip Code 29203 Project Name STAKEPIERS Project No. 6-3-2730E	Report to Contact Scott Ross Sampler & Signature Printed Name Scott Ross, James Leggett	Telephone No. / E-mail 803 234 4400 Scott.Ross@aelson.com Analysis (Attach list if more space is needed)	Quote No. 803 234 4400 Page 1 of 1	Barcode QI17060	Remnants / Cooler I.D.
Matrix Soil Sediment Sludge Air Water Ice Other		No. of Containers by Preservative Type HCL HNO3 H2SO4 None		Possible Hazard Identification <input checked="" type="checkbox"/> Acid-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	
Sample ID / Description (Containers for each sample may be combined on one line.) SW-1 (2) SW-2 (2) SW-3 (2) TRIP BLANK	Date 9-17-15 9-17-15 9-17-15 ---	Time 1045 1115 1140 ---	Matrix Soil Sediment Sludge Air Water Ice Other	No. of Containers by Preservative Type HCL HNO3 H2SO4 None	Possible Hazard Identification <input checked="" type="checkbox"/> Acid-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown
Turn Around Time Required (Prior lab approval required for expedited TAT.) <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)		Sample Disposal <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Dispose by Lab		CC Requirements (Specify)	
1. Relinquished by 	Date 9-17-15	Time 1412	1. Received by Date 9/17/15		Time 1412
2. Relinquished by	Date	Time	2. Received by		Time
3. Relinquished by	Date	Time	3. Received by		Time
4. Relinquished by	Date	Time	4. Laboratory received by LAB USE ONLY Received on ice (Circle) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Ice Pack <input type="checkbox"/> Received Temp. 2.0 °C		Time 1412

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
 Document Number: F-AD-016
 Revision Number: 17

Page 1 of 1
 Replaces Date: 11/07/14
 Effective Date: 04/30/15

Sample Receipt Checklist (SRC)

Client: AE.com Cooler Inspected by/date: mem/09/17/15 Lot #: Q17060

Means of receipt: <input checked="" type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>25.2</u> °C / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0.0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	18. Were bubbles present >"pca-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L. (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>mem</u> Verified by: _____ Date: <u>9/17/15</u>		

Comments:

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **60328308.12**

Lot Number: **QI18009**

Date Completed: **09/23/2015**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: Q118009

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: Q118009

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	ROLLOFF #1	Solid	09/18/2015 0850	09/18/2015

(1 sample)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: Q118009

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
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(0 detections)

TCLP Volatiles

Client: AECOM	Laboratory ID: QI18009-001
Description: ROLLOFF #1	Matrix: Solid
Date Sampled: 09/18/2015 0850	
Date Received: 09/18/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Leachate Date
1	1311/5030B	8260B	10	09/22/2015 2235	JJG		85565	09/21/2015 1934

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		0.050	0.0021	mg/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		0.10	0.018	mg/L	1
Carbon tetrachloride	56-23-5	8260B	ND		0.050	0.0031	mg/L	1
Chlorobenzene	108-90-7	8260B	ND		0.050	0.0020	mg/L	1
Chloroform	67-66-3	8260B	ND		0.050	0.0021	mg/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		0.050	0.0023	mg/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		0.050	0.0031	mg/L	1
Tetrachloroethene	127-18-4	8260B	ND		0.050	0.0022	mg/L	1
Trichloroethene	79-01-6	8260B	ND		0.050	0.0016	mg/L	1
Vinyl chloride	75-01-4	8260B	ND		0.010	0.0050	mg/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	70-130
Bromofluorobenzene		83	70-130
Toluene-d8		92	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

TCLP Volatiles - MB

Sample ID: QQ85565-001

Matrix: Solid

Batch: 85565

Prep Method: 1311/5030B

Analytical Method: 8260B

Leachate Date: 09/21/2015 1934

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		10	0.050	0.0021	mg/L	09/22/2015 1759
2-Butanone (MEK)	ND		10	0.10	0.018	mg/L	09/22/2015 1759
Carbon tetrachloride	ND		10	0.050	0.0031	mg/L	09/22/2015 1759
Chlorobenzene	ND		10	0.050	0.0020	mg/L	09/22/2015 1759
Chloroform	0.0030	J	10	0.050	0.0021	mg/L	09/22/2015 1759
1,2-Dichloroethane	ND		10	0.050	0.0023	mg/L	09/22/2015 1759
1,1-Dichloroethene	ND		10	0.050	0.0031	mg/L	09/22/2015 1759
Tetrachloroethene	ND		10	0.050	0.0022	mg/L	09/22/2015 1759
Trichloroethene	ND		10	0.050	0.0016	mg/L	09/22/2015 1759
Vinyl chloride	ND		10	0.010	0.0050	mg/L	09/22/2015 1759
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		83	70-130				
1,2-Dichloroethane-d4		89	70-130				
Toluene-d8		94	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TCLP Volatiles - LCS

Sample ID: QQ85565-002

Matrix: Solid

Batch: 85565

Prep Method: 1311/5030B

Analytical Method: 8260B

Leachate Date: 09/21/2015 1934

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	0.50	0.54		10	109	72-127	09/22/2015 1821
2-Butanone (MEK)	1.0	1.0		10	100	60-140	09/22/2015 1821
Carbon tetrachloride	0.50	0.53		10	107	37-166	09/22/2015 1821
Chlorobenzene	0.50	0.54		10	107	78-129	09/22/2015 1821
Chloroform	0.50	0.48		10	97	63-123	09/22/2015 1821
1,2-Dichloroethane	0.50	0.49		10	99	59-143	09/22/2015 1821
1,1-Dichloroethene	0.50	0.56		10	112	50-132	09/22/2015 1821
Tetrachloroethene	0.50	0.59		10	117	70-130	09/22/2015 1821
Trichloroethene	0.50	0.56		10	113	73-124	09/22/2015 1821
Vinyl chloride	0.50	0.63		10	126	29-159	09/22/2015 1821
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		96	70-130				
1,2-Dichloroethane-d4		83	70-130				
Toluene-d8		92	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**



Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 52536

Client AFCOM	Request to Contact? Scott Ross	Telephone No. / E-mail (803) 201-9666 / scross@acfdn.com	Quote No. Q18009
Address 101 Research Drive		Analysis (Attach list if more space is needed)	
City Columbia	State SC	Zip Code 29203	Page 1 of 1
Project Name Shakespeare - Newbery		 Q18009	
Project No. 60323308-12	F.O. No.	Remarks / Cooler I.D.	
Sample ID / Description Oil # 1	Date 9/18/15		
(Containers for each sample may be contained on one line.)			
 Matrix: <input type="checkbox"/> Air <input type="checkbox"/> Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Sludge <input type="checkbox"/> Other No. of Containers by Preservative Type: <input type="checkbox"/> None <input type="checkbox"/> HCl <input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> HF <input type="checkbox"/> HClO4 <input type="checkbox"/> None 			
 Possible Hazard Identification: <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown 			
 Sample Disposal: <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Dispose by Lab 1. Received by: Scott Ross Date: 9/17/15 Time: 11:37 2. Received by: _____ Date: _____ Time: _____ 3. Received by: _____ Date: _____ Time: _____ 4. Laboratory received by: _____ Date: 9/18/15 Time: 11:37 			
Note: All samples are retained for four weeks from receipt unless other arrangements are made.			
LAB USE ONLY		Receipt Temp. 20.2 °C	
Received on ice (Circle) <input checked="" type="radio"/> Yes <input type="radio"/> No		Ice Pack <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
 Document Number: F-AD-016
 Revision Number: 17

Page 1 of 1
 Replaces Date: 11/07/14
 Effective Date: 04/30/15

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: JGJ 9/18/15 Lot #: QI18009

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>128.8/28.8 °C</u> / <u> </u> °C / <u> </u> °C / <u> </u> °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input checked="" type="checkbox"/> None		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by <u>(SRC)</u> , phone, note (circle one), other: <u> </u> (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) <u> </u> were received incorrectly preserved and were adjusted accordingly in sample receiving with <u> </u> (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # <u> </u>		
Sample(s) <u> </u> were received with bubbles >6 mm in diameter.		
Sample(s) <u> </u> were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by <u> </u> Date: <u> </u>		
Sample(s) <u> </u> were not received at a pH of <2 and were adjusted accordingly using SR# <u> </u>		
Sample labels applied by: <u>JGJ</u> Verified by: <u> </u> Date: <u>9/18/15</u>		

Comments:

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **603283308.10**

Lot Number: **QL17089**

Date Completed: **12/30/2015**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: QL17089

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: QL17089

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	TMW-111	Aqueous	12/14/2015 1650	12/17/2015
002	TMW-114	Aqueous	12/15/2015 1500	12/17/2015
003	TRIP BLANK	Aqueous	12/14/2015	12/17/2015

(3 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: QL17089

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
002	TMW-114	Aqueous	cis-1,2-Dichloroethene	8260B	3.2	J	ug/L	7
002	TMW-114	Aqueous	Tetrachloroethene	8260B	0.40	J	ug/L	7
002	TMW-114	Aqueous	Trichloroethene	8260B	66		ug/L	8
003	TRIP BLANK	Aqueous	Chloroform	8260B	0.26	BJ	ug/L	9

(4 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QL17089-001
Description: TMW-111	Matrix: Aqueous
Date Sampled: 12/14/2015 1650	
Date Received: 12/17/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/24/2015 1050	PAP		92992

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QL17089-001
Description: TMW-111	Matrix: Aqueous
Date Sampled: 12/14/2015 1650	
Date Received: 12/17/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/24/2015 1050	PAP		92992

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		89	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QL17089-002
Description: TMW-114	Matrix: Aqueous
Date Sampled: 12/15/2015 1500	
Date Received: 12/17/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/24/2015 1112	PAP		92992

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	3.2	J	5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	0.40	J	5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QL17089-002
Description: TMW-114	Matrix: Aqueous
Date Sampled: 12/15/2015 1500	
Date Received: 12/17/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/24/2015 1112	PAP		92992

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	66		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		86	70-130
Bromofluorobenzene		87	70-130
Toluene-d8		98	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: **AECOM**

Laboratory ID: **QL17089-003**

Description: **TRIP BLANK**

Matrix: **Aqueous**

Date Sampled: **12/14/2015**

Date Received: **12/17/2015**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/24/2015 1029	PAP		92992

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	0.26	BJ	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QL17089-003
Description: TRIP BLANK	Matrix: Aqueous
Date Sampled: 12/14/2015	
Date Received: 12/17/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/24/2015 1029	PAP		92992

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		89	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ92992-001

Matrix: Aqueous

Batch: 92992

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	12/24/2015 0943
Benzene	ND		1	5.0	0.21	ug/L	12/24/2015 0943
Bromodichloromethane	ND		1	5.0	0.23	ug/L	12/24/2015 0943
Bromoform	ND		1	5.0	0.35	ug/L	12/24/2015 0943
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	12/24/2015 0943
2-Butanone (MEK)	ND		1	10	1.8	ug/L	12/24/2015 0943
Carbon disulfide	ND		1	5.0	0.45	ug/L	12/24/2015 0943
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	12/24/2015 0943
Chlorobenzene	ND		1	5.0	0.20	ug/L	12/24/2015 0943
Chloroethane	ND		1	5.0	0.28	ug/L	12/24/2015 0943
Chloroform	0.29	J	1	5.0	0.21	ug/L	12/24/2015 0943
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	12/24/2015 0943
Cyclohexane	ND		1	5.0	0.30	ug/L	12/24/2015 0943
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	12/24/2015 0943
Dibromochloromethane	ND		1	5.0	0.23	ug/L	12/24/2015 0943
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	12/24/2015 0943
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	12/24/2015 0943
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	12/24/2015 0943
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	12/24/2015 0943
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	12/24/2015 0943
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	12/24/2015 0943
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	12/24/2015 0943
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	12/24/2015 0943
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	12/24/2015 0943
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	12/24/2015 0943
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	12/24/2015 0943
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	12/24/2015 0943
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	12/24/2015 0943
Ethylbenzene	ND		1	5.0	0.21	ug/L	12/24/2015 0943
2-Hexanone	ND		1	10	0.26	ug/L	12/24/2015 0943
Isopropylbenzene	ND		1	5.0	0.14	ug/L	12/24/2015 0943
Methyl acetate	ND		1	5.0	0.24	ug/L	12/24/2015 0943
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	12/24/2015 0943
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	12/24/2015 0943
Methylcyclohexane	ND		1	5.0	0.16	ug/L	12/24/2015 0943
Methylene chloride	ND		1	5.0	0.42	ug/L	12/24/2015 0943
Styrene	ND		1	5.0	0.13	ug/L	12/24/2015 0943
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	12/24/2015 0943
Tetrachloroethene	ND		1	5.0	0.22	ug/L	12/24/2015 0943
Toluene	ND		1	5.0	0.24	ug/L	12/24/2015 0943
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	12/24/2015 0943
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	12/24/2015 0943
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	12/24/2015 0943
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	12/24/2015 0943

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ92992-001

Matrix: Aqueous

Batch: 92992

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	12/24/2015 0943
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	12/24/2015 0943
Vinyl chloride	ND		1	2.0	0.50	ug/L	12/24/2015 0943
Xylenes (total)	ND		1	5.0	0.32	ug/L	12/24/2015 0943
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		102	70-130				
1,2-Dichloroethane-d4		103	70-130				
Toluene-d8		108	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ92992-002

Matrix: Aqueous

Batch: 92992

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	100	60-140	12/24/2015 0843
Benzene	50	56		1	112	70-130	12/24/2015 0843
Bromodichloromethane	50	54		1	109	70-130	12/24/2015 0843
Bromoform	50	54		1	107	70-130	12/24/2015 0843
Bromomethane (Methyl bromide)	50	52		1	103	60-140	12/24/2015 0843
2-Butanone (MEK)	100	120		1	120	60-140	12/24/2015 0843
Carbon disulfide	50	73	N	1	146	60-140	12/24/2015 0843
Carbon tetrachloride	50	61		1	123	70-130	12/24/2015 0843
Chlorobenzene	50	53		1	106	70-130	12/24/2015 0843
Chloroethane	50	52		1	103	60-140	12/24/2015 0843
Chloroform	50	51		1	103	70-130	12/24/2015 0843
Chloromethane (Methyl chloride)	50	52		1	104	60-140	12/24/2015 0843
Cyclohexane	50	61		1	122	70-130	12/24/2015 0843
1,2-Dibromo-3-chloropropane (DBCP)	50	55		1	110	70-130	12/24/2015 0843
Dibromochloromethane	50	54		1	108	70-130	12/24/2015 0843
1,2-Dibromoethane (EDB)	50	52		1	103	70-130	12/24/2015 0843
1,4-Dichlorobenzene	50	51		1	101	70-130	12/24/2015 0843
1,3-Dichlorobenzene	50	51		1	103	70-130	12/24/2015 0843
1,2-Dichlorobenzene	50	53		1	107	70-130	12/24/2015 0843
Dichlorodifluoromethane	50	62		1	124	60-140	12/24/2015 0843
1,2-Dichloroethane	50	54		1	108	70-130	12/24/2015 0843
1,1-Dichloroethane	50	58		1	116	70-130	12/24/2015 0843
trans-1,2-Dichloroethene	50	58		1	116	70-130	12/24/2015 0843
cis-1,2-Dichloroethene	50	55		1	109	70-130	12/24/2015 0843
1,1-Dichloroethene	50	60		1	121	70-130	12/24/2015 0843
1,2-Dichloropropane	50	57		1	113	70-130	12/24/2015 0843
trans-1,3-Dichloropropene	50	55		1	110	70-130	12/24/2015 0843
cis-1,3-Dichloropropene	50	54		1	109	70-130	12/24/2015 0843
Ethylbenzene	50	54		1	107	70-130	12/24/2015 0843
2-Hexanone	100	110		1	111	60-140	12/24/2015 0843
Isopropylbenzene	50	55		1	110	70-130	12/24/2015 0843
Methyl acetate	50	60		1	121	60-140	12/24/2015 0843
Methyl tertiary butyl ether (MTBE)	50	59		1	119	70-130	12/24/2015 0843
4-Methyl-2-pentanone	100	110		1	108	60-140	12/24/2015 0843
Methylcyclohexane	50	61		1	122	70-130	12/24/2015 0843
Methylene chloride	50	57		1	114	70-130	12/24/2015 0843
Styrene	50	54		1	108	70-130	12/24/2015 0843
1,1,2,2-Tetrachloroethane	50	57		1	114	70-130	12/24/2015 0843
Tetrachloroethene	50	56		1	112	70-130	12/24/2015 0843
Toluene	50	56		1	111	70-130	12/24/2015 0843
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	67	N	1	133	70-130	12/24/2015 0843
1,2,4-Trichlorobenzene	50	43		1	86	70-130	12/24/2015 0843
1,1,2-Trichloroethane	50	55		1	110	70-130	12/24/2015 0843
1,1,1-Trichloroethane	50	59		1	118	70-130	12/24/2015 0843

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ92992-002

Matrix: Aqueous

Batch: 92992

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	54		1	108	70-130	12/24/2015 0843
Trichlorofluoromethane	50	49		1	98	70-130	12/24/2015 0843
Vinyl chloride	50	52		1	104	70-130	12/24/2015 0843
Xylenes (total)	100	110		1	108	70-130	12/24/2015 0843
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		101	70-130				
1,2-Dichloroethane-d4		100	70-130				
Toluene-d8		105	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**



Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number **55911**

Client AECOM	Report to Contact Scott Ross	Telephone No. / E-mail (803) 254-4400	Quote No.
Address 101 Research Drive		Analysis (Attach list if more spaces is needed)	
City Columbia	State SC	Zip Code 29203	Page 1 of 1
Project Name Shakespeare - Newberry	Project No. 60328308.10	Printed Name Scott E. Ross / Charles K. Sublett	 QL17089
Sample ID / Description (Containers for each sample may be contained on one line.)	Date	Time	
TMW-111	12/14/15	1650	
TMW-114	12/15/15	1500	
Trip State			

Turn Around Time Required (Prior lab approval required for expedited TAT.)	Standard	Rush (Specify)	Sample Disposed	Returned to Client	Sample Disposition		Possible Hazard Identification	GC Requirements (Specify)	
					1. Relinquished by	2. Relinquished by			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Date	Time	1. Received by	Date	Time
					12/17/15	1415	Scott E. Ross	12/17/15	1415
					Date	Time	2. Received by	Date	Time
					12/17/15	1542			
					Date	Time	3. Received by	Date	Time
					Date	Time	4. Laboratory received	Date	Time
							Matthew McDonald	12/17/15	1942

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

Retained on ice (Circle) No Ice Pack Receipt Temp. **5.3** °C

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-01

Page 1 of 1
Replaces Date: 09/23/15
Effective Date: 04/30/15

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: TJG / 12/17/15 Lot #: QL17089

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
pH strip ID: <u>NA</u> Cl strip ID: _____		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>5.3 / 5.3 °C</u> / _____ °C / _____ °C / _____ °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a. Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	18. Were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/IEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be >2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>TJG</u> Verified by: _____ Date: <u>12/17/15</u>		

Comments:

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **60318382.Task5**

Lot Number: **RA13091**

Date Completed: **01/18/2016**



Nisreen Saikaly
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: RA13091

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: RA13091

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	SDW-1	Aqueous	01/13/2016 1215	01/13/2016
002	MW-24	Aqueous	01/13/2016 1315	01/13/2016
003	MW-23	Aqueous	01/13/2016 1445	01/13/2016

(3 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: RA13091

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	SDW-1	Aqueous	cis-1,2-Dichloroethene	8260B	0.96	J	ug/L	5
001	SDW-1	Aqueous	Trichloroethene	8260B	16		ug/L	6
003	MW-23	Aqueous	Carbon disulfide	8260B	1.1	J	ug/L	9
003	MW-23	Aqueous	Trichloroethene	8260B	0.95	J	ug/L	10

(4 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: RA13091-001
Description: SDW-1	Matrix: Aqueous
Date Sampled: 01/13/2016 1215	
Date Received: 01/13/2016	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/14/2016 1639	PAP		94262

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	0.96	J	5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: RA13091-001
Description: SDW-1	Matrix: Aqueous
Date Sampled: 01/13/2016 1215	
Date Received: 01/13/2016	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/14/2016 1639	PAP		94262

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	16		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: RA13091-002
Description: MW-24	Matrix: Aqueous
Date Sampled: 01/13/2016 1315	
Date Received: 01/13/2016	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/14/2016 1702	PAP		94262

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
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 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: RA13091-002
Description: MW-24	Matrix: Aqueous
Date Sampled: 01/13/2016 1315	
Date Received: 01/13/2016	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/14/2016 1702	PAP		94262

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		95	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: RA13091-003
Description: MW-23	Matrix: Aqueous
Date Sampled: 01/13/2016 1445	
Date Received: 01/13/2016	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2016 1812	SES		94350

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	1.1	J	5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: RA13091-003
Description: MW-23	Matrix: Aqueous
Date Sampled: 01/13/2016 1445	
Date Received: 01/13/2016	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	01/15/2016 1812	SES		94350

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	0.95	J	5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		85	70-130
Bromofluorobenzene		96	70-130
Toluene-d8		95	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: RQ94262-001

Matrix: Aqueous

Batch: 94262

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	01/14/2016 0931
Benzene	ND		1	5.0	0.21	ug/L	01/14/2016 0931
Bromodichloromethane	ND		1	5.0	0.23	ug/L	01/14/2016 0931
Bromoform	ND		1	5.0	0.35	ug/L	01/14/2016 0931
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	01/14/2016 0931
2-Butanone (MEK)	ND		1	10	1.8	ug/L	01/14/2016 0931
Carbon disulfide	ND		1	5.0	0.45	ug/L	01/14/2016 0931
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	01/14/2016 0931
Chlorobenzene	ND		1	5.0	0.20	ug/L	01/14/2016 0931
Chloroethane	ND		1	5.0	0.28	ug/L	01/14/2016 0931
Chloroform	ND		1	5.0	0.21	ug/L	01/14/2016 0931
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	01/14/2016 0931
Cyclohexane	ND		1	5.0	0.30	ug/L	01/14/2016 0931
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	01/14/2016 0931
Dibromochloromethane	ND		1	5.0	0.23	ug/L	01/14/2016 0931
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	01/14/2016 0931
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	01/14/2016 0931
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	01/14/2016 0931
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	01/14/2016 0931
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	01/14/2016 0931
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	01/14/2016 0931
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	01/14/2016 0931
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	01/14/2016 0931
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	01/14/2016 0931
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	01/14/2016 0931
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	01/14/2016 0931
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	01/14/2016 0931
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	01/14/2016 0931
Ethylbenzene	ND		1	5.0	0.21	ug/L	01/14/2016 0931
2-Hexanone	ND		1	10	0.26	ug/L	01/14/2016 0931
Isopropylbenzene	ND		1	5.0	0.14	ug/L	01/14/2016 0931
Methyl acetate	ND		1	5.0	0.24	ug/L	01/14/2016 0931
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	01/14/2016 0931
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	01/14/2016 0931
Methylcyclohexane	ND		1	5.0	0.16	ug/L	01/14/2016 0931
Methylene chloride	ND		1	5.0	0.42	ug/L	01/14/2016 0931
Styrene	ND		1	5.0	0.13	ug/L	01/14/2016 0931
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	01/14/2016 0931
Tetrachloroethene	ND		1	5.0	0.22	ug/L	01/14/2016 0931
Toluene	ND		1	5.0	0.24	ug/L	01/14/2016 0931
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	01/14/2016 0931
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	01/14/2016 0931
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	01/14/2016 0931
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	01/14/2016 0931

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: RQ94262-001

Matrix: Aqueous

Batch: 94262

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	01/14/2016 0931
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	01/14/2016 0931
Vinyl chloride	ND		1	2.0	0.50	ug/L	01/14/2016 0931
Xylenes (total)	ND		1	5.0	0.32	ug/L	01/14/2016 0931
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		99	70-130				
1,2-Dichloroethane-d4		90	70-130				
Toluene-d8		99	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: RQ94262-002

Matrix: Aqueous

Batch: 94262

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	80		1	80	60-140	01/14/2016 0829
Benzene	50	41		1	82	70-130	01/14/2016 0829
Bromodichloromethane	50	42		1	83	70-130	01/14/2016 0829
Bromoform	50	46		1	93	70-130	01/14/2016 0829
Bromomethane (Methyl bromide)	50	46		1	93	60-140	01/14/2016 0829
2-Butanone (MEK)	100	81		1	81	60-140	01/14/2016 0829
Carbon disulfide	50	52		1	104	60-140	01/14/2016 0829
Carbon tetrachloride	50	43		1	86	70-130	01/14/2016 0829
Chlorobenzene	50	46		1	91	70-130	01/14/2016 0829
Chloroethane	50	46		1	93	60-140	01/14/2016 0829
Chloroform	50	41		1	82	70-130	01/14/2016 0829
Chloromethane (Methyl chloride)	50	44		1	89	60-140	01/14/2016 0829
Cyclohexane	50	43		1	85	70-130	01/14/2016 0829
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	95	70-130	01/14/2016 0829
Dibromochloromethane	50	47		1	94	70-130	01/14/2016 0829
1,2-Dibromoethane (EDB)	50	46		1	91	70-130	01/14/2016 0829
1,4-Dichlorobenzene	50	46		1	92	70-130	01/14/2016 0829
1,3-Dichlorobenzene	50	47		1	94	70-130	01/14/2016 0829
1,2-Dichlorobenzene	50	47		1	93	70-130	01/14/2016 0829
Dichlorodifluoromethane	50	44		1	88	60-140	01/14/2016 0829
1,2-Dichloroethane	50	40		1	81	70-130	01/14/2016 0829
1,1-Dichloroethane	50	40		1	79	70-130	01/14/2016 0829
trans-1,2-Dichloroethene	50	40		1	80	70-130	01/14/2016 0829
cis-1,2-Dichloroethene	50	40		1	79	70-130	01/14/2016 0829
1,1-Dichloroethene	50	44		1	89	70-130	01/14/2016 0829
1,2-Dichloropropane	50	41		1	82	70-130	01/14/2016 0829
trans-1,3-Dichloropropene	50	46		1	93	70-130	01/14/2016 0829
cis-1,3-Dichloropropene	50	43		1	85	70-130	01/14/2016 0829
Ethylbenzene	50	47		1	94	70-130	01/14/2016 0829
2-Hexanone	100	92		1	92	60-140	01/14/2016 0829
Isopropylbenzene	50	48		1	97	70-130	01/14/2016 0829
Methyl acetate	50	38		1	75	60-140	01/14/2016 0829
Methyl tertiary butyl ether (MTBE)	50	39		1	78	70-130	01/14/2016 0829
4-Methyl-2-pentanone	100	82		1	82	60-140	01/14/2016 0829
Methylcyclohexane	50	49		1	99	70-130	01/14/2016 0829
Methylene chloride	50	45		1	89	70-130	01/14/2016 0829
Styrene	50	48		1	95	70-130	01/14/2016 0829
1,1,2,2-Tetrachloroethane	50	47		1	93	70-130	01/14/2016 0829
Tetrachloroethene	50	48		1	96	70-130	01/14/2016 0829
Toluene	50	47		1	93	70-130	01/14/2016 0829
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	44		1	89	70-130	01/14/2016 0829
1,2,4-Trichlorobenzene	50	47		1	94	70-130	01/14/2016 0829
1,1,1-Trichloroethane	50	42		1	84	70-130	01/14/2016 0829
1,1,2-Trichloroethane	50	45		1	90	70-130	01/14/2016 0829

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: RQ94262-002

Matrix: Aqueous

Batch: 94262

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	42		1	85	70-130	01/14/2016 0829
Trichlorofluoromethane	50	54		1	108	70-130	01/14/2016 0829
Vinyl chloride	50	44		1	87	70-130	01/14/2016 0829
Xylenes (total)	100	95		1	95	70-130	01/14/2016 0829
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		98	70-130				
1,2-Dichloroethane-d4		85	70-130				
Toluene-d8		99	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: RQ94350-001

Matrix: Aqueous

Batch: 94350

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	01/15/2016 1041
Benzene	ND		1	5.0	0.21	ug/L	01/15/2016 1041
Bromodichloromethane	ND		1	5.0	0.23	ug/L	01/15/2016 1041
Bromoform	ND		1	5.0	0.35	ug/L	01/15/2016 1041
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	01/15/2016 1041
2-Butanone (MEK)	ND		1	10	1.8	ug/L	01/15/2016 1041
Carbon disulfide	ND		1	5.0	0.45	ug/L	01/15/2016 1041
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	01/15/2016 1041
Chlorobenzene	ND		1	5.0	0.20	ug/L	01/15/2016 1041
Chloroethane	ND		1	5.0	0.28	ug/L	01/15/2016 1041
Chloroform	ND		1	5.0	0.21	ug/L	01/15/2016 1041
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	01/15/2016 1041
Cyclohexane	ND		1	5.0	0.30	ug/L	01/15/2016 1041
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	01/15/2016 1041
Dibromochloromethane	ND		1	5.0	0.23	ug/L	01/15/2016 1041
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	01/15/2016 1041
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	01/15/2016 1041
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	01/15/2016 1041
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	01/15/2016 1041
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	01/15/2016 1041
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	01/15/2016 1041
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	01/15/2016 1041
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	01/15/2016 1041
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	01/15/2016 1041
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	01/15/2016 1041
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	01/15/2016 1041
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	01/15/2016 1041
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	01/15/2016 1041
Ethylbenzene	ND		1	5.0	0.21	ug/L	01/15/2016 1041
2-Hexanone	ND		1	10	0.26	ug/L	01/15/2016 1041
Isopropylbenzene	ND		1	5.0	0.14	ug/L	01/15/2016 1041
Methyl acetate	ND		1	5.0	0.24	ug/L	01/15/2016 1041
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	01/15/2016 1041
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	01/15/2016 1041
Methylcyclohexane	ND		1	5.0	0.16	ug/L	01/15/2016 1041
Methylene chloride	ND		1	5.0	0.42	ug/L	01/15/2016 1041
Styrene	ND		1	5.0	0.13	ug/L	01/15/2016 1041
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	01/15/2016 1041
Tetrachloroethene	ND		1	5.0	0.22	ug/L	01/15/2016 1041
Toluene	ND		1	5.0	0.24	ug/L	01/15/2016 1041
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	01/15/2016 1041
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	01/15/2016 1041
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	01/15/2016 1041
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	01/15/2016 1041

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: RQ94350-001

Matrix: Aqueous

Batch: 94350

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	01/15/2016 1041
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	01/15/2016 1041
Vinyl chloride	ND		1	2.0	0.50	ug/L	01/15/2016 1041
Xylenes (total)	ND		1	5.0	0.32	ug/L	01/15/2016 1041
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		97	70-130				
1,2-Dichloroethane-d4		84	70-130				
Toluene-d8		96	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: RQ94350-002

Matrix: Aqueous

Batch: 94350

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	109	60-140	01/15/2016 0944
Benzene	50	42		1	83	70-130	01/15/2016 0944
Bromodichloromethane	50	42		1	85	70-130	01/15/2016 0944
Bromoform	50	48		1	97	70-130	01/15/2016 0944
Bromomethane (Methyl bromide)	50	39		1	79	60-140	01/15/2016 0944
2-Butanone (MEK)	100	100		1	100	60-140	01/15/2016 0944
Carbon disulfide	50	56		1	112	60-140	01/15/2016 0944
Carbon tetrachloride	50	42		1	84	70-130	01/15/2016 0944
Chlorobenzene	50	47		1	94	70-130	01/15/2016 0944
Chloroethane	50	38		1	76	60-140	01/15/2016 0944
Chloroform	50	42		1	85	70-130	01/15/2016 0944
Chloromethane (Methyl chloride)	50	39		1	78	60-140	01/15/2016 0944
Cyclohexane	50	40		1	81	70-130	01/15/2016 0944
1,2-Dibromo-3-chloropropane (DBCP)	50	49		1	97	70-130	01/15/2016 0944
Dibromochloromethane	50	47		1	94	70-130	01/15/2016 0944
1,2-Dibromoethane (EDB)	50	47		1	93	70-130	01/15/2016 0944
1,3-Dichlorobenzene	50	49		1	98	70-130	01/15/2016 0944
1,2-Dichlorobenzene	50	48		1	96	70-130	01/15/2016 0944
1,4-Dichlorobenzene	50	47		1	95	70-130	01/15/2016 0944
Dichlorodifluoromethane	50	34		1	68	60-140	01/15/2016 0944
1,1-Dichloroethane	50	41		1	82	70-130	01/15/2016 0944
1,2-Dichloroethane	50	42		1	83	70-130	01/15/2016 0944
cis-1,2-Dichloroethene	50	41		1	82	70-130	01/15/2016 0944
1,1-Dichloroethene	50	43		1	86	70-130	01/15/2016 0944
trans-1,2-Dichloroethene	50	41		1	82	70-130	01/15/2016 0944
1,2-Dichloropropane	50	43		1	86	70-130	01/15/2016 0944
cis-1,3-Dichloropropene	50	44		1	88	70-130	01/15/2016 0944
trans-1,3-Dichloropropene	50	47		1	93	70-130	01/15/2016 0944
Ethylbenzene	50	48		1	97	70-130	01/15/2016 0944
2-Hexanone	100	110		1	106	60-140	01/15/2016 0944
Isopropylbenzene	50	49		1	97	70-130	01/15/2016 0944
Methyl acetate	50	43		1	85	60-140	01/15/2016 0944
Methyl tertiary butyl ether (MTBE)	50	40		1	81	70-130	01/15/2016 0944
4-Methyl-2-pentanone	100	97		1	97	60-140	01/15/2016 0944
Methylcyclohexane	50	46		1	93	70-130	01/15/2016 0944
Methylene chloride	50	45		1	90	70-130	01/15/2016 0944
Styrene	50	49		1	98	70-130	01/15/2016 0944
1,1,2,2-Tetrachloroethane	50	49		1	98	70-130	01/15/2016 0944
Tetrachloroethene	50	49		1	97	70-130	01/15/2016 0944
Toluene	50	46		1	92	70-130	01/15/2016 0944
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	49		1	98	70-130	01/15/2016 0944
1,2,4-Trichlorobenzene	50	49		1	98	70-130	01/15/2016 0944
1,1,2-Trichloroethane	50	46		1	91	70-130	01/15/2016 0944
1,1,1-Trichloroethane	50	41		1	82	70-130	01/15/2016 0944

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: RQ94350-002

Matrix: Aqueous

Batch: 94350

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	43		1	86	70-130	01/15/2016 0944
Trichlorofluoromethane	50	44		1	87	70-130	01/15/2016 0944
Vinyl chloride	50	36		1	73	70-130	01/15/2016 0944
Xylenes (total)	100	97		1	97	70-130	01/15/2016 0944
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		101	70-130				
1,2-Dichloroethane-d4		82	70-130				
Toluene-d8		97	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-01

Page 1 of 1
Replaces Date: 09/23/15
Effective Date: 04/30/15

Sample Receipt Checklist (SRC)

Client: AECOM

Cooler Inspected by/date: (MAA) / 1/13/16 Lot #: RA13091

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 2. If custody seals were present, were they intact and unbroken?
pH strip ID: _____ Cl strip ID: _____		
Cooler ID/Original temperature upon receipt/derived (corrected) temperature upon receipt: <u> / 3.5 / 3.5 °C / / / °C / / / °C / / / °C</u>		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/> 18. Were bubbles present >"pea-size" (½" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L. (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be >2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>(MAA)</u> Verified by: _____ Date: <u>1/13/16</u>		

Comments:

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **60328308.11**

Lot Number: **RB26034**

Date Completed: **03/01/2016**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: RB26034

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: RB26034

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-25	Aqueous	02/26/2016 1330	02/26/2016

(1 sample)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: RB26034

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-25	Aqueous	Chloroform	8260B	4.0	BJ	ug/L	5
001	MW-25	Aqueous	Trichloroethene	8260B	0.90	J	ug/L	6

(2 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: RB26034-001
Description: MW-25	Matrix: Aqueous
Date Sampled: 02/26/2016 1330	
Date Received: 02/26/2016	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/27/2016 1635	RAG		97293

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	4.0	BJ	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: RB26034-001
Description: MW-25	Matrix: Aqueous
Date Sampled: 02/26/2016 1330	
Date Received: 02/26/2016	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/27/2016 1635	RAG		97293

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	0.90	J	5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		100	70-130
Toluene-d8		104	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: RQ97293-001

Matrix: Aqueous

Batch: 97293

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	02/27/2016 1152
Benzene	ND		1	5.0	0.21	ug/L	02/27/2016 1152
Bromodichloromethane	ND		1	5.0	0.23	ug/L	02/27/2016 1152
Bromoform	ND		1	5.0	0.35	ug/L	02/27/2016 1152
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	02/27/2016 1152
2-Butanone (MEK)	ND		1	10	1.8	ug/L	02/27/2016 1152
Carbon disulfide	ND		1	5.0	0.45	ug/L	02/27/2016 1152
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	02/27/2016 1152
Chlorobenzene	ND		1	5.0	0.20	ug/L	02/27/2016 1152
Chloroethane	ND		1	5.0	0.28	ug/L	02/27/2016 1152
Chloroform	0.33	J	1	5.0	0.21	ug/L	02/27/2016 1152
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	02/27/2016 1152
Cyclohexane	ND		1	5.0	0.30	ug/L	02/27/2016 1152
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	02/27/2016 1152
Dibromochloromethane	ND		1	5.0	0.23	ug/L	02/27/2016 1152
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	02/27/2016 1152
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	02/27/2016 1152
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	02/27/2016 1152
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	02/27/2016 1152
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	02/27/2016 1152
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	02/27/2016 1152
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	02/27/2016 1152
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	02/27/2016 1152
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	02/27/2016 1152
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	02/27/2016 1152
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	02/27/2016 1152
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	02/27/2016 1152
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	02/27/2016 1152
Ethylbenzene	ND		1	5.0	0.21	ug/L	02/27/2016 1152
2-Hexanone	ND		1	10	0.26	ug/L	02/27/2016 1152
Isopropylbenzene	ND		1	5.0	0.14	ug/L	02/27/2016 1152
Methyl acetate	ND		1	5.0	0.24	ug/L	02/27/2016 1152
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	02/27/2016 1152
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	02/27/2016 1152
Methylcyclohexane	ND		1	5.0	0.16	ug/L	02/27/2016 1152
Methylene chloride	ND		1	5.0	0.42	ug/L	02/27/2016 1152
Styrene	ND		1	5.0	0.13	ug/L	02/27/2016 1152
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	02/27/2016 1152
Tetrachloroethene	ND		1	5.0	0.22	ug/L	02/27/2016 1152
Toluene	ND		1	5.0	0.24	ug/L	02/27/2016 1152
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	02/27/2016 1152
1,2,4-Trichlorobenzene	0.21	J	1	5.0	0.13	ug/L	02/27/2016 1152
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	02/27/2016 1152
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	02/27/2016 1152

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: RQ97293-001

Matrix: Aqueous

Batch: 97293

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	02/27/2016 1152
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	02/27/2016 1152
Vinyl chloride	ND		1	2.0	0.50	ug/L	02/27/2016 1152
Xylenes (total)	ND		1	5.0	0.32	ug/L	02/27/2016 1152
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		101	70-130				
1,2-Dichloroethane-d4		99	70-130				
Toluene-d8		104	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: RQ97293-002

Matrix: Aqueous

Batch: 97293

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	100	60-140	02/27/2016 1058
Benzene	50	52		1	104	70-130	02/27/2016 1058
Bromodichloromethane	50	57		1	113	70-130	02/27/2016 1058
Bromoform	50	49		1	99	70-130	02/27/2016 1058
Bromomethane (Methyl bromide)	50	51		1	101	60-140	02/27/2016 1058
2-Butanone (MEK)	100	91		1	91	60-140	02/27/2016 1058
Carbon disulfide	50	54		1	107	60-140	02/27/2016 1058
Carbon tetrachloride	50	58		1	117	70-130	02/27/2016 1058
Chlorobenzene	50	59		1	119	70-130	02/27/2016 1058
Chloroethane	50	50		1	100	60-140	02/27/2016 1058
Chloroform	50	53		1	106	70-130	02/27/2016 1058
Chloromethane (Methyl chloride)	50	48		1	96	60-140	02/27/2016 1058
Cyclohexane	50	56		1	113	70-130	02/27/2016 1058
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	97	70-130	02/27/2016 1058
Dibromochloromethane	50	59		1	119	70-130	02/27/2016 1058
1,2-Dibromoethane (EDB)	50	55		1	111	70-130	02/27/2016 1058
1,3-Dichlorobenzene	50	62		1	123	70-130	02/27/2016 1058
1,4-Dichlorobenzene	50	60		1	121	70-130	02/27/2016 1058
1,2-Dichlorobenzene	50	59		1	118	70-130	02/27/2016 1058
Dichlorodifluoromethane	50	54		1	108	60-140	02/27/2016 1058
1,2-Dichloroethane	50	51		1	102	70-130	02/27/2016 1058
1,1-Dichloroethane	50	55		1	110	70-130	02/27/2016 1058
cis-1,2-Dichloroethene	50	54		1	108	70-130	02/27/2016 1058
1,1-Dichloroethene	50	56		1	112	70-130	02/27/2016 1058
trans-1,2-Dichloroethene	50	56		1	111	70-130	02/27/2016 1058
1,2-Dichloropropane	50	53		1	107	70-130	02/27/2016 1058
trans-1,3-Dichloropropene	50	56		1	111	70-130	02/27/2016 1058
cis-1,3-Dichloropropene	50	56		1	112	70-130	02/27/2016 1058
Ethylbenzene	50	59		1	118	70-130	02/27/2016 1058
2-Hexanone	100	92		1	92	60-140	02/27/2016 1058
Isopropylbenzene	50	63		1	126	70-130	02/27/2016 1058
Methyl acetate	50	43		1	85	60-140	02/27/2016 1058
Methyl tertiary butyl ether (MTBE)	50	47		1	94	70-130	02/27/2016 1058
4-Methyl-2-pentanone	100	96		1	96	60-140	02/27/2016 1058
Methylcyclohexane	50	59		1	118	70-130	02/27/2016 1058
Methylene chloride	50	54		1	108	70-130	02/27/2016 1058
Styrene	50	61		1	122	70-130	02/27/2016 1058
1,1,2,2-Tetrachloroethane	50	54		1	109	70-130	02/27/2016 1058
Tetrachloroethene	50	59		1	119	70-130	02/27/2016 1058
Toluene	50	55		1	111	70-130	02/27/2016 1058
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	62		1	123	70-130	02/27/2016 1058
1,2,4-Trichlorobenzene	50	51		1	102	70-130	02/27/2016 1058
1,1,1-Trichloroethane	50	57		1	114	70-130	02/27/2016 1058
1,1,2-Trichloroethane	50	54		1	109	70-130	02/27/2016 1058

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: RQ97293-002

Matrix: Aqueous

Batch: 97293

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	56		1	112	70-130	02/27/2016 1058
Trichlorofluoromethane	50	56		1	112	70-130	02/27/2016 1058
Vinyl chloride	50	50		1	100	70-130	02/27/2016 1058
Xylenes (total)	100	130		1	125	70-130	02/27/2016 1058
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		99	70-130				
1,2-Dichloroethane-d4		93	70-130				
Toluene-d8		101	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: MED018C-04

Page 1 of 1
Effective Date: 02/05/2016
Expiry Date: 02/05/2021

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: man / 02/26/16 Lot #: RS26037

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 2. If custody seals were present, were they intact and unbroken?
pH strip ID: _____ Cl strip ID: _____		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>11.6/11.6</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0.0</u> °C		
Method of coolant: <input type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input checked="" type="checkbox"/> None		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/> 3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM was notified by: phone / <u>email</u> / face-to-face (circle one).
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were any samples containers missing/excess (circle one) samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/> 16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 19. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	22. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Samples(s) _____ were received with TRC >0.2 mg/L (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: _____		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>man</u> Verified by: _____ Date: <u>2/26/16</u>		

Comments: _____

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **60328308.11**

Lot Number: **RC03069**

Date Completed: **03/09/2016**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: RC03069

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: RC03069

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW24I	Aqueous	03/03/2016 1450	03/03/2016

(1 sample)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: RC03069

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW24I	Aqueous	Chloroform	8260B	2.1	J	ug/L	5
001	MW24I	Aqueous	Trichloroethene	8260B	1.8	J	ug/L	6

(2 detections)

Volatile Organic Compounds by GC/MS

Client: **AECOM**

Laboratory ID: **RC03069-001**

Description: **MW241**

Matrix: **Aqueous**

Date Sampled: **03/03/2016 1450**

Date Received: **03/03/2016**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/07/2016 2019	ECP		97884

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	2.1	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: RC03069-001
Description: MW241	Matrix: Aqueous
Date Sampled: 03/03/2016 1450	
Date Received: 03/03/2016	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/07/2016 2019	ECP		97884

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	1.8	J	5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		92	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: RQ97884-001

Matrix: Aqueous

Batch: 97884

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	03/07/2016 1655
Benzene	ND		1	5.0	0.21	ug/L	03/07/2016 1655
Bromodichloromethane	ND		1	5.0	0.23	ug/L	03/07/2016 1655
Bromoform	ND		1	5.0	0.35	ug/L	03/07/2016 1655
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	03/07/2016 1655
2-Butanone (MEK)	ND		1	10	1.8	ug/L	03/07/2016 1655
Carbon disulfide	ND		1	5.0	0.45	ug/L	03/07/2016 1655
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	03/07/2016 1655
Chlorobenzene	ND		1	5.0	0.20	ug/L	03/07/2016 1655
Chloroethane	ND		1	5.0	0.28	ug/L	03/07/2016 1655
Chloroform	ND		1	5.0	0.21	ug/L	03/07/2016 1655
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	03/07/2016 1655
Cyclohexane	ND		1	5.0	0.30	ug/L	03/07/2016 1655
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	03/07/2016 1655
Dibromochloromethane	ND		1	5.0	0.23	ug/L	03/07/2016 1655
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	03/07/2016 1655
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	03/07/2016 1655
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	03/07/2016 1655
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	03/07/2016 1655
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	03/07/2016 1655
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	03/07/2016 1655
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	03/07/2016 1655
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	03/07/2016 1655
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	03/07/2016 1655
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	03/07/2016 1655
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	03/07/2016 1655
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	03/07/2016 1655
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	03/07/2016 1655
Ethylbenzene	ND		1	5.0	0.21	ug/L	03/07/2016 1655
2-Hexanone	ND		1	10	0.26	ug/L	03/07/2016 1655
Isopropylbenzene	ND		1	5.0	0.14	ug/L	03/07/2016 1655
Methyl acetate	ND		1	5.0	0.24	ug/L	03/07/2016 1655
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	03/07/2016 1655
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	03/07/2016 1655
Methylcyclohexane	ND		1	5.0	0.16	ug/L	03/07/2016 1655
Methylene chloride	ND		1	5.0	0.42	ug/L	03/07/2016 1655
Styrene	ND		1	5.0	0.13	ug/L	03/07/2016 1655
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	03/07/2016 1655
Tetrachloroethene	ND		1	5.0	0.22	ug/L	03/07/2016 1655
Toluene	ND		1	5.0	0.24	ug/L	03/07/2016 1655
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	03/07/2016 1655
1,2,4-Trichlorobenzene	0.23	J	1	5.0	0.13	ug/L	03/07/2016 1655
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	03/07/2016 1655
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	03/07/2016 1655

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: RQ97884-001

Matrix: Aqueous

Batch: 97884

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	03/07/2016 1655
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	03/07/2016 1655
Vinyl chloride	ND		1	2.0	0.50	ug/L	03/07/2016 1655
Xylenes (total)	ND		1	5.0	0.32	ug/L	03/07/2016 1655
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		90	70-130				
1,2-Dichloroethane-d4		91	70-130				
Toluene-d8		96	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: RQ97884-002

Matrix: Aqueous

Batch: 97884

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	99		1	99	60-140	03/07/2016 1600
Benzene	50	50		1	101	70-130	03/07/2016 1600
Bromodichloromethane	50	54		1	109	70-130	03/07/2016 1600
Bromoform	50	47		1	93	70-130	03/07/2016 1600
Bromomethane (Methyl bromide)	50	53		1	107	60-140	03/07/2016 1600
2-Butanone (MEK)	100	110		1	105	60-140	03/07/2016 1600
Carbon disulfide	50	47		1	94	60-140	03/07/2016 1600
Carbon tetrachloride	50	59		1	118	70-130	03/07/2016 1600
Chlorobenzene	50	51		1	101	70-130	03/07/2016 1600
Chloroethane	50	50		1	100	60-140	03/07/2016 1600
Chloroform	50	53		1	105	70-130	03/07/2016 1600
Chloromethane (Methyl chloride)	50	48		1	97	60-140	03/07/2016 1600
Cyclohexane	50	50		1	100	70-130	03/07/2016 1600
1,2-Dibromo-3-chloropropane (DBCP)	50	46		1	91	70-130	03/07/2016 1600
Dibromochloromethane	50	53		1	107	70-130	03/07/2016 1600
1,2-Dibromoethane (EDB)	50	53		1	105	70-130	03/07/2016 1600
1,2-Dichlorobenzene	50	48		1	96	70-130	03/07/2016 1600
1,3-Dichlorobenzene	50	46		1	92	70-130	03/07/2016 1600
1,4-Dichlorobenzene	50	45		1	90	70-130	03/07/2016 1600
Dichlorodifluoromethane	50	56		1	112	60-140	03/07/2016 1600
1,2-Dichloroethane	50	49		1	99	70-130	03/07/2016 1600
1,1-Dichloroethane	50	54		1	107	70-130	03/07/2016 1600
1,1-Dichloroethene	50	54		1	108	70-130	03/07/2016 1600
trans-1,2-Dichloroethene	50	52		1	104	70-130	03/07/2016 1600
cis-1,2-Dichloroethene	50	51		1	103	70-130	03/07/2016 1600
1,2-Dichloropropane	50	51		1	103	70-130	03/07/2016 1600
trans-1,3-Dichloropropene	50	54		1	108	70-130	03/07/2016 1600
cis-1,3-Dichloropropene	50	56		1	113	70-130	03/07/2016 1600
Ethylbenzene	50	50		1	100	70-130	03/07/2016 1600
2-Hexanone	100	110		1	107	60-140	03/07/2016 1600
Isopropylbenzene	50	52		1	103	70-130	03/07/2016 1600
Methyl acetate	50	55		1	110	60-140	03/07/2016 1600
Methyl tertiary butyl ether (MTBE)	50	50		1	99	70-130	03/07/2016 1600
4-Methyl-2-pentanone	100	110		1	111	60-140	03/07/2016 1600
Methylcyclohexane	50	51		1	101	70-130	03/07/2016 1600
Methylene chloride	50	52		1	104	70-130	03/07/2016 1600
Styrene	50	54		1	108	70-130	03/07/2016 1600
1,1,2,2-Tetrachloroethane	50	47		1	93	70-130	03/07/2016 1600
Tetrachloroethene	50	52		1	104	70-130	03/07/2016 1600
Toluene	50	52		1	103	70-130	03/07/2016 1600
1,1,2-Trichloro-1,1,2-Trifluoroethane	50	53		1	106	70-130	03/07/2016 1600
1,2,4-Trichlorobenzene	50	47		1	94	70-130	03/07/2016 1600
1,1,1-Trichloroethane	50	54		1	109	70-130	03/07/2016 1600
1,1,2-Trichloroethane	50	49		1	98	70-130	03/07/2016 1600

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: RQ97884-002

Matrix: Aqueous

Batch: 97884

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	50		1	100	70-130	03/07/2016 1600
Trichlorofluoromethane	50	50		1	100	70-130	03/07/2016 1600
Vinyl chloride	50	48		1	97	70-130	03/07/2016 1600
Xylenes (total)	100	110		1	106	70-130	03/07/2016 1600
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		88	70-130				
1,2-Dichloroethane-d4		86	70-130				
Toluene-d8		91	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

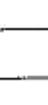
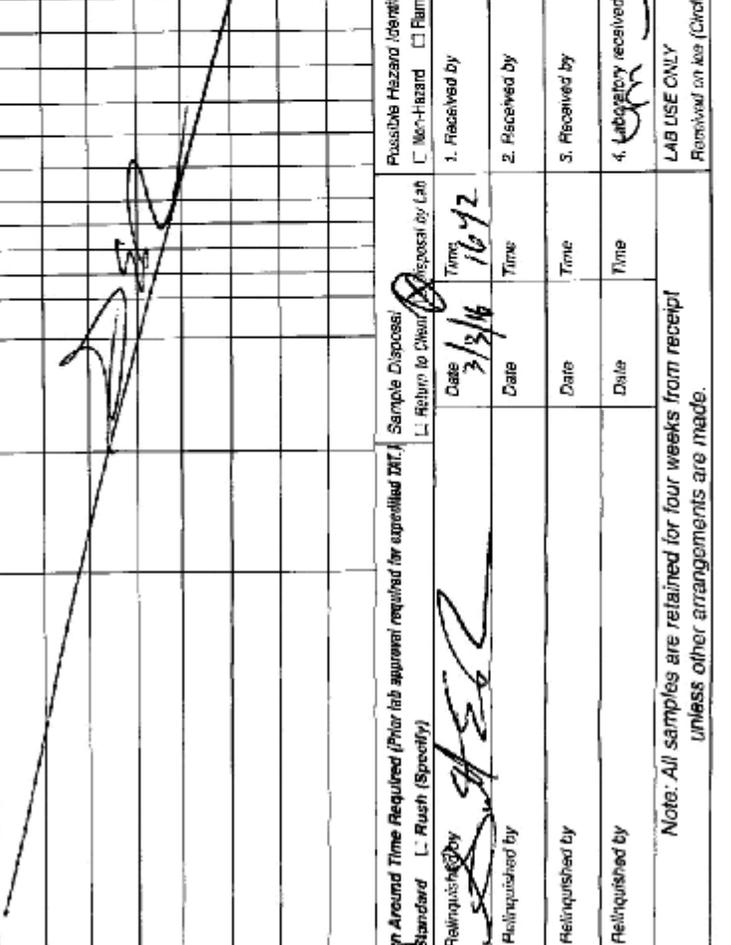
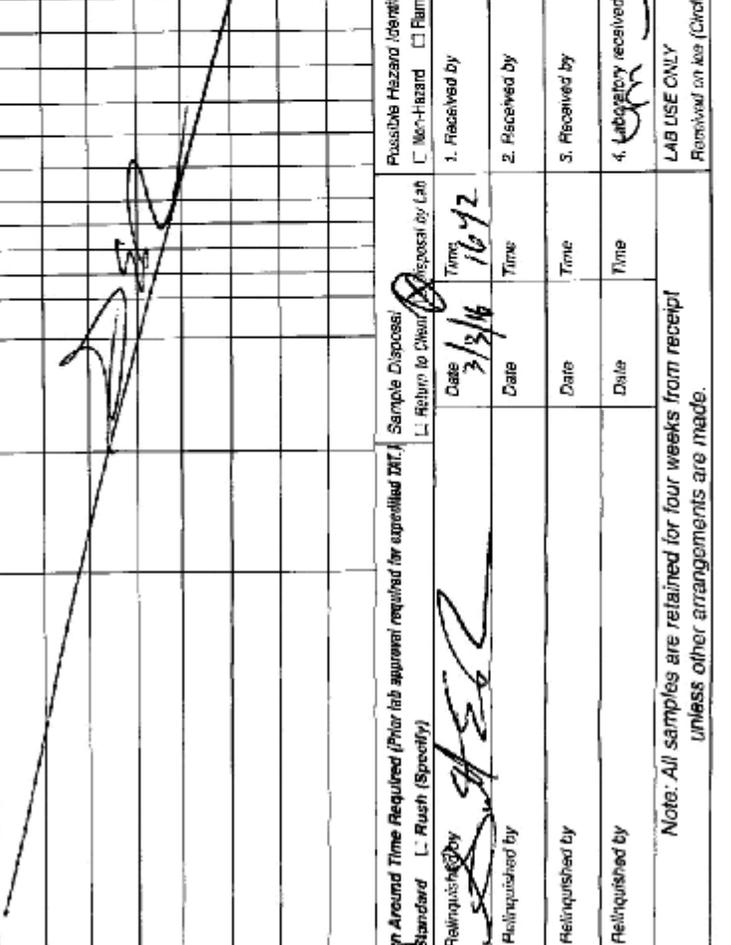
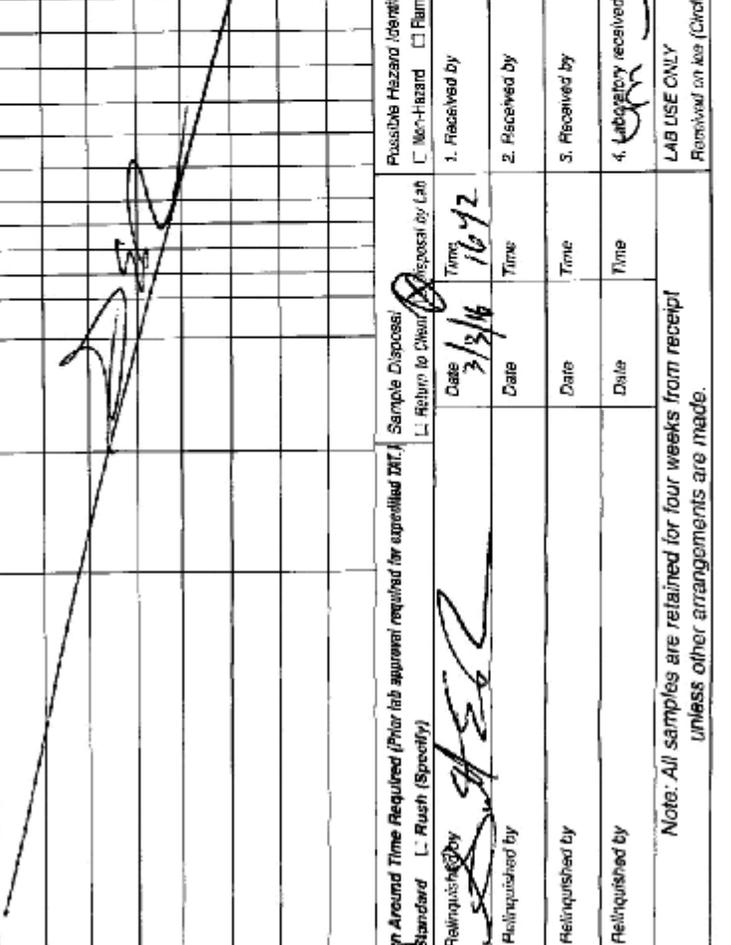
**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number **54042**

Chain of Custody Record

Client AECOM Address 101 Research Drive City Columbia State SC Zip Code 29203 Project Name Shoemaker - Stenberg Project No. 00328308.11 Sample ID / Description MAND-I (Containers for each sample may be combined on one form.)	Report to Contact Scott Davis Sampler's Signature  Printed Name Scott E. Davis	Telephone No. / E-mail (803) 254-1400 Analysis (Attach list if more space is needed) TSP, VOCs	Quote No. Page 1 of 1 Barcode  RC03069 Remarks / Cooler I.D.																																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Sample ID / Description</th> <th rowspan="2">Date</th> <th rowspan="2">Time</th> <th rowspan="2">Matrix</th> <th colspan="6">No. of Containers by Preservative Type</th> <th rowspan="2">OC Requirements (Specify)</th> </tr> <tr> <th>Formaldehyde</th> <th>Ascorbic Acid</th> <th>EDTA</th> <th>HA</th> <th>MSA</th> <th>MSA/HA</th> </tr> </thead> <tbody> <tr> <td>MAND-I</td> <td>3/2/16</td> <td>1450</td> <td>C</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> </tr> <tr> <td colspan="11" style="text-align: center;">  </td> </tr> </tbody> </table>				Sample ID / Description	Date	Time	Matrix	No. of Containers by Preservative Type						OC Requirements (Specify)	Formaldehyde	Ascorbic Acid	EDTA	HA	MSA	MSA/HA	MAND-I	3/2/16	1450	C	X						X											
Sample ID / Description	Date	Time	Matrix					No. of Containers by Preservative Type							OC Requirements (Specify)																											
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MAND-I	3/2/16	1450	C	X						X																																
																																										
Chain of Custody 1. Relinquished by  Date <u>3/2/16</u> Time <u>1642</u> 2. Relinquished by _____ Date _____ Time _____ 3. Relinquished by _____ Date _____ Time _____ 4. Relinquished by _____ Date _____ Time _____																																										
Sample Disposed: <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Destroyed Date <u>3/2/16</u> Time <u>1642</u>																																										
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown																																										
Note: All samples are retained for four weeks from receipt unless other arrangements are made.																																										
LAB USE ONLY Removed on box (Circle) <input checked="" type="checkbox"/> No Ice Pack <input type="checkbox"/> Receipt Temp. <u>5.6</u> °C																																										

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-01

Page 1 of 1
Effective Date: 02/05/2016
Expiry Date: 02/05/2021

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: kgg 1/3/3/16 Lot #: RC03069

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 2. If custody seals were present, were they intact and unbroken?
pH strip ID: <u>NA</u> CI strip ID: <u>NA</u>		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>15.6 / 5.6 °C</u> / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM was notified by: phone / email / face-to-face (circle one).
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were any samples containers missing/excess (circle one) samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/> 16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 19. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	22. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: _____		
SC Drinking Water Project Sample(s) pH verified to be >2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>kgg</u> Verified by: _____ Date: <u>3/3/16</u>		

Comments: _____

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **60328308.11**

Lot Number: **RD26033**

Date Completed: **04/29/2016**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: RD26033

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: RD26033

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW 9D	Aqueous	04/25/2016 1340	04/26/2016
002	MW 9D - DUP	Aqueous	04/25/2016 1340	04/26/2016
003	SDW 2	Aqueous	04/26/2016 1215	04/26/2016
004	TRIP BLANK	Aqueous	04/26/2016	04/26/2016

(4 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: RD26033

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW 9D	Aqueous	Acetone	8260B	2.4	J	ug/L	5
001	MW 9D	Aqueous	Chloroform	8260B	2.0	J	ug/L	5
001	MW 9D	Aqueous	Trichloroethene	8260B	3.1	J	ug/L	6
002	MW 9D - DUP	Aqueous	Acetone	8260B	1.9	J	ug/L	7
002	MW 9D - DUP	Aqueous	Chloroform	8260B	1.9	J	ug/L	7
002	MW 9D - DUP	Aqueous	Trichloroethene	8260B	3.1	J	ug/L	8
003	SDW 2	Aqueous	Acetone	8260B	11	J	ug/L	9
003	SDW 2	Aqueous	2-Butanone (MEK)	8260B	2.3	J	ug/L	9
003	SDW 2	Aqueous	Chloroform	8260B	5.7		ug/L	9
003	SDW 2	Aqueous	Chloromethane (Methyl	8260B	0.37	J	ug/L	9
003	SDW 2	Aqueous	2-Hexanone	8260B	0.59	J	ug/L	9
003	SDW 2	Aqueous	4-Methyl-2-pentanone	8260B	0.92	J	ug/L	9
003	SDW 2	Aqueous	Methylene chloride	8260B	1.8	J	ug/L	9
003	SDW 2	Aqueous	Toluene	8260B	27		ug/L	9

(14 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: RD26033-001
Description: MW 9D	Matrix: Aqueous
Date Sampled: 04/25/2016 1340	
Date Received: 04/26/2016	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/28/2016 1638	RAG		12025

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	2.4	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	2.0	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: RD26033-001
Description: MW 9D	Matrix: Aqueous
Date Sampled: 04/25/2016 1340	
Date Received: 04/26/2016	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/28/2016 1638	RAG		12025

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	3.1	J	5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		97	70-130
Bromofluorobenzene		95	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: RD26033-002
Description: MW 9D - DUP	Matrix: Aqueous
Date Sampled: 04/25/2016 1340	
Date Received: 04/26/2016	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/28/2016 1701	RAG		12025

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	1.9	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	1.9	J	5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: RD26033-002
Description: MW 9D - DUP	Matrix: Aqueous
Date Sampled: 04/25/2016 1340	
Date Received: 04/26/2016	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/28/2016 1701	RAG		12025

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	3.1	J	5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: RD26033-003
Description: SDW 2	Matrix: Aqueous
Date Sampled: 04/26/2016 1215	
Date Received: 04/26/2016	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/28/2016 1724	RAG		12025

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	11	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	2.3	J	10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	5.7		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	0.37	J	5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	0.59	J	10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	0.92	J	10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	1.8	J	5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	27		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: RD26033-003
Description: SDW 2	Matrix: Aqueous
Date Sampled: 04/26/2016 1215	
Date Received: 04/26/2016	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/28/2016 1724	RAG		12025

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		97	70-130
Bromofluorobenzene		95	70-130
Toluene-d8		104	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: RD26033-004
Description: TRIP BLANK	Matrix: Aqueous
Date Sampled: 04/26/2016	
Date Received: 04/26/2016	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/28/2016 1158	RAG		12025

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: RD26033-004
Description: TRIP BLANK	Matrix: Aqueous
Date Sampled: 04/26/2016	
Date Received: 04/26/2016	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/28/2016 1158	RAG		12025

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		94	70-130
Toluene-d8		102	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: RQ12025-001

Matrix: Aqueous

Batch: 12025

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	04/28/2016 1026
Benzene	ND		1	5.0	0.21	ug/L	04/28/2016 1026
Bromodichloromethane	ND		1	5.0	0.23	ug/L	04/28/2016 1026
Bromoform	ND		1	5.0	0.35	ug/L	04/28/2016 1026
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	04/28/2016 1026
2-Butanone (MEK)	ND		1	10	1.8	ug/L	04/28/2016 1026
Carbon disulfide	ND		1	5.0	0.45	ug/L	04/28/2016 1026
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	04/28/2016 1026
Chlorobenzene	ND		1	5.0	0.20	ug/L	04/28/2016 1026
Chloroethane	ND		1	5.0	0.28	ug/L	04/28/2016 1026
Chloroform	ND		1	5.0	0.21	ug/L	04/28/2016 1026
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	04/28/2016 1026
Cyclohexane	ND		1	5.0	0.30	ug/L	04/28/2016 1026
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	04/28/2016 1026
Dibromochloromethane	ND		1	5.0	0.23	ug/L	04/28/2016 1026
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	04/28/2016 1026
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	04/28/2016 1026
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	04/28/2016 1026
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	04/28/2016 1026
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	04/28/2016 1026
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	04/28/2016 1026
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	04/28/2016 1026
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	04/28/2016 1026
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	04/28/2016 1026
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	04/28/2016 1026
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	04/28/2016 1026
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	04/28/2016 1026
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	04/28/2016 1026
Ethylbenzene	ND		1	5.0	0.21	ug/L	04/28/2016 1026
2-Hexanone	ND		1	10	0.26	ug/L	04/28/2016 1026
Isopropylbenzene	ND		1	5.0	0.14	ug/L	04/28/2016 1026
Methyl acetate	ND		1	5.0	0.24	ug/L	04/28/2016 1026
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	04/28/2016 1026
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	04/28/2016 1026
Methylcyclohexane	ND		1	5.0	0.16	ug/L	04/28/2016 1026
Methylene chloride	ND		1	5.0	0.42	ug/L	04/28/2016 1026
Styrene	ND		1	5.0	0.13	ug/L	04/28/2016 1026
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	04/28/2016 1026
Tetrachloroethene	ND		1	5.0	0.22	ug/L	04/28/2016 1026
Toluene	ND		1	5.0	0.24	ug/L	04/28/2016 1026
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	04/28/2016 1026
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	04/28/2016 1026
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	04/28/2016 1026
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	04/28/2016 1026

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: RQ12025-001

Matrix: Aqueous

Batch: 12025

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	04/28/2016 1026
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	04/28/2016 1026
Vinyl chloride	ND		1	2.0	0.50	ug/L	04/28/2016 1026
Xylenes (total)	ND		1	5.0	0.32	ug/L	04/28/2016 1026
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		95	70-130				
1,2-Dichloroethane-d4		96	70-130				
Toluene-d8		104	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: RQ12025-002

Matrix: Aqueous

Batch: 12025

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	76		1	76	60-140	04/28/2016 0919
Benzene	50	42		1	84	70-130	04/28/2016 0919
Bromodichloromethane	50	44		1	88	70-130	04/28/2016 0919
Bromoform	50	45		1	91	70-130	04/28/2016 0919
Bromomethane (Methyl bromide)	50	49		1	97	60-140	04/28/2016 0919
2-Butanone (MEK)	100	76		1	76	60-140	04/28/2016 0919
Carbon disulfide	50	34		1	68	60-140	04/28/2016 0919
Carbon tetrachloride	50	42		1	83	70-130	04/28/2016 0919
Chlorobenzene	50	46		1	92	70-130	04/28/2016 0919
Chloroethane	50	47		1	95	60-140	04/28/2016 0919
Chloroform	50	41		1	82	70-130	04/28/2016 0919
Chloromethane (Methyl chloride)	50	46		1	93	60-140	04/28/2016 0919
Cyclohexane	50	44		1	88	70-130	04/28/2016 0919
1,2-Dibromo-3-chloropropane (DBCP)	50	39		1	78	70-130	04/28/2016 0919
Dibromochloromethane	50	46		1	92	70-130	04/28/2016 0919
1,2-Dibromoethane (EDB)	50	46		1	92	70-130	04/28/2016 0919
1,4-Dichlorobenzene	50	44		1	89	70-130	04/28/2016 0919
1,3-Dichlorobenzene	50	46		1	92	70-130	04/28/2016 0919
1,2-Dichlorobenzene	50	47		1	93	70-130	04/28/2016 0919
Dichlorodifluoromethane	50	60		1	120	60-140	04/28/2016 0919
1,2-Dichloroethane	50	43		1	86	70-130	04/28/2016 0919
1,1-Dichloroethane	50	41		1	83	70-130	04/28/2016 0919
trans-1,2-Dichloroethene	50	42		1	85	70-130	04/28/2016 0919
cis-1,2-Dichloroethene	50	41		1	83	70-130	04/28/2016 0919
1,1-Dichloroethene	50	39		1	78	70-130	04/28/2016 0919
1,2-Dichloropropane	50	40		1	81	70-130	04/28/2016 0919
trans-1,3-Dichloropropene	50	43		1	86	70-130	04/28/2016 0919
cis-1,3-Dichloropropene	50	43		1	85	70-130	04/28/2016 0919
Ethylbenzene	50	48		1	95	70-130	04/28/2016 0919
2-Hexanone	100	110		1	108	60-140	04/28/2016 0919
Isopropylbenzene	50	44		1	88	70-130	04/28/2016 0919
Methyl acetate	50	42		1	84	60-140	04/28/2016 0919
Methyl tertiary butyl ether (MTBE)	50	37		1	74	70-130	04/28/2016 0919
4-Methyl-2-pentanone	100	100		1	101	60-140	04/28/2016 0919
Methylcyclohexane	50	42		1	84	70-130	04/28/2016 0919
Methylene chloride	50	35		1	71	70-130	04/28/2016 0919
Styrene	50	47		1	94	70-130	04/28/2016 0919
1,1,2,2-Tetrachloroethane	50	42		1	84	70-130	04/28/2016 0919
Tetrachloroethene	50	54		1	108	70-130	04/28/2016 0919
Toluene	50	46		1	93	70-130	04/28/2016 0919
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	41		1	82	70-130	04/28/2016 0919
1,2,4-Trichlorobenzene	50	41		1	82	70-130	04/28/2016 0919
1,1,2-Trichloroethane	50	44		1	89	70-130	04/28/2016 0919
1,1,1-Trichloroethane	50	46		1	92	70-130	04/28/2016 0919

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: RQ12025-002

Matrix: Aqueous

Batch: 12025

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	47		1	95	70-130	04/28/2016 0919
Trichlorofluoromethane	50	53		1	106	70-130	04/28/2016 0919
Vinyl chloride	50	48		1	96	70-130	04/28/2016 0919
Xylenes (total)	100	98		1	98	70-130	04/28/2016 0919
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		97			70-130		
1,2-Dichloroethane-d4		93			70-130		
Toluene-d8		103			70-130		

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-04

Page 1 of 1
Effective Date: 02/05/2016
Expiry Date: 02/05/2021

Sample Receipt Checklist (SRC)

Client: AECOM

Cooler Inspected by/date: WAA/4/26/16 Lot #: RD26033

Means of receipt: <input checked="" type="checkbox"/> SES1 <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
pH strip ID: _____ CI strip ID: _____		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>3100 15.75.7 °C</u> / _____ °C / _____ °C / _____ °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM was notified by: phone / email / face-to-face (circle one).
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were any samples containers missing/excess (circle one) samples not listed on COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	16. Were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	22. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H2SO4, HNO3, HCl, NaOH) using SR # _____		
Sample(s) <u>#3 (1) & #4 (all)</u> were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na2S2O3) with Shealy ID: _____		
SC Drinking Water Project Sample(s) pH verified to be >2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>WAA</u> Verified by: _____ Date: <u>4/26/16</u>		

Comments: _____

PHASE I RI SW DATA

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Project Number: **60327308**

Lot Number: **QI17060**

Date Completed: **09/28/2015**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: Q117060

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: QI17060

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	SW-1(2)	Aqueous	09/17/2015 1045	09/17/2015
002	SW-2(2)	Aqueous	09/17/2015 1115	09/17/2015
003	SW-3(2)	Aqueous	09/17/2015 1140	09/17/2015
004	TRIP BLANK	Aqueous	09/17/2015	09/17/2015

(4 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: QI17060

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	SW-1(2)	Aqueous	Acetone	8260B	3.7	J	ug/L	5
001	SW-1(2)	Aqueous	cis-1,2-Dichloroethene	8260B	0.52	J	ug/L	5
002	SW-2(2)	Aqueous	Acetone	8260B	2.6	J	ug/L	7
002	SW-2(2)	Aqueous	cis-1,2-Dichloroethene	8260B	6.3		ug/L	7
002	SW-2(2)	Aqueous	Toluene	8260B	0.38	J	ug/L	7
002	SW-2(2)	Aqueous	Trichloroethene	8260B	0.92	J	ug/L	8
003	SW-3(2)	Aqueous	Acetone	8260B	2.9	J	ug/L	9
003	SW-3(2)	Aqueous	Chloromethane (Methyl	8260B	0.24	J	ug/L	9

(8 detections)

Volatile Organic Compounds by GC/MS

 Client: **AECOM**

 Laboratory ID: **QI17060-001**

 Description: **SW-1(2)**

 Matrix: **Aqueous**

 Date Sampled: **09/17/2015 1045**

 Date Received: **09/17/2015**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/25/2015 1650	SES		85803

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	3.7	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	0.52	J	5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: Q117060-001
Description: SW-1(2)	Matrix: Aqueous
Date Sampled: 09/17/2015 1045	
Date Received: 09/17/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/25/2015 1650	SES		85803

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		91	70-130
Bromofluorobenzene		109	70-130
Toluene-d8		83	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QI17060-002
Description: SW-2(2)	Matrix: Aqueous
Date Sampled: 09/17/2015 1115	
Date Received: 09/17/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/25/2015 1712	SES		85803

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	2.6	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	6.3		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	0.38	J	5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QI17060-002
Description: SW-2(2)	Matrix: Aqueous
Date Sampled: 09/17/2015 1115	
Date Received: 09/17/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/25/2015 1712	SES		85803

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	0.92	J	5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		91	70-130
Bromofluorobenzene		107	70-130
Toluene-d8		83	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: QI17060-003
Description: SW-3(2)	Matrix: Aqueous
Date Sampled: 09/17/2015 1140	
Date Received: 09/17/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/25/2015 1735	SES		85803

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	2.9	J	20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	0.24	J	5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: Q117060-003
Description: SW-3(2)	Matrix: Aqueous
Date Sampled: 09/17/2015 1140	
Date Received: 09/17/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/25/2015 1735	SES		85803

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		82	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

 Client: **AECOM**

 Laboratory ID: **QI17060-004**

 Description: **TRIP BLANK**

 Matrix: **Aqueous**

 Date Sampled: **09/17/2015**

 Date Received: **09/17/2015**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/25/2015 1215	SES		85803

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	1.6	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.23	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.35	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.19	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	1.8	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.45	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.31	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.20	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.28	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.21	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.19	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.30	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.57	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.23	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.17	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.46	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.19	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.19	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.85	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.19	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.31	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.20	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.33	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.29	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.30	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.22	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	0.26	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.14	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.24	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	0.29	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.16	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.42	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.13	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.13	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.22	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.30	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.13	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.24	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.22	ug/L	1

PQL = Practical quantitation limit
 B = Detected in the method blank
 E = Quantitation of compound exceeded the calibration range
 H = Out of holding time
 ND = Not detected at or above the MDL
 J = Estimated result < PQL and ≥ MDL
 P = The RPD between two GC columns exceeds 40%
 N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: Q117060-004
Description: TRIP BLANK	Matrix: Aqueous
Date Sampled: 09/17/2015	
Date Received: 09/17/2015	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	09/25/2015 1215	SES		85803

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.16	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.74	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.50	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		91	70-130
Bromofluorobenzene		109	70-130
Toluene-d8		84	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ85803-001

Matrix: Aqueous

Batch: 85803

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	1.6	ug/L	09/25/2015 1055
Benzene	ND		1	5.0	0.21	ug/L	09/25/2015 1055
Bromodichloromethane	ND		1	5.0	0.23	ug/L	09/25/2015 1055
Bromoform	ND		1	5.0	0.35	ug/L	09/25/2015 1055
Bromomethane (Methyl bromide)	ND		1	5.0	0.19	ug/L	09/25/2015 1055
2-Butanone (MEK)	ND		1	10	1.8	ug/L	09/25/2015 1055
Carbon disulfide	ND		1	5.0	0.45	ug/L	09/25/2015 1055
Carbon tetrachloride	ND		1	5.0	0.31	ug/L	09/25/2015 1055
Chlorobenzene	ND		1	5.0	0.20	ug/L	09/25/2015 1055
Chloroethane	ND		1	5.0	0.28	ug/L	09/25/2015 1055
Chloroform	ND		1	5.0	0.21	ug/L	09/25/2015 1055
Chloromethane (Methyl chloride)	ND		1	5.0	0.19	ug/L	09/25/2015 1055
Cyclohexane	ND		1	5.0	0.30	ug/L	09/25/2015 1055
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.57	ug/L	09/25/2015 1055
Dibromochloromethane	ND		1	5.0	0.23	ug/L	09/25/2015 1055
1,2-Dibromoethane (EDB)	ND		1	5.0	0.17	ug/L	09/25/2015 1055
1,4-Dichlorobenzene	ND		1	5.0	0.19	ug/L	09/25/2015 1055
1,3-Dichlorobenzene	ND		1	5.0	0.19	ug/L	09/25/2015 1055
1,2-Dichlorobenzene	ND		1	5.0	0.46	ug/L	09/25/2015 1055
Dichlorodifluoromethane	ND		1	5.0	0.85	ug/L	09/25/2015 1055
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	09/25/2015 1055
1,1-Dichloroethane	ND		1	5.0	0.19	ug/L	09/25/2015 1055
trans-1,2-Dichloroethene	ND		1	5.0	0.33	ug/L	09/25/2015 1055
cis-1,2-Dichloroethene	ND		1	5.0	0.20	ug/L	09/25/2015 1055
1,1-Dichloroethene	ND		1	5.0	0.31	ug/L	09/25/2015 1055
1,2-Dichloropropane	ND		1	5.0	0.29	ug/L	09/25/2015 1055
trans-1,3-Dichloropropene	ND		1	5.0	0.22	ug/L	09/25/2015 1055
cis-1,3-Dichloropropene	ND		1	5.0	0.30	ug/L	09/25/2015 1055
Ethylbenzene	ND		1	5.0	0.21	ug/L	09/25/2015 1055
2-Hexanone	ND		1	10	0.26	ug/L	09/25/2015 1055
Isopropylbenzene	ND		1	5.0	0.14	ug/L	09/25/2015 1055
Methyl acetate	ND		1	5.0	0.24	ug/L	09/25/2015 1055
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	09/25/2015 1055
4-Methyl-2-pentanone	ND		1	10	0.29	ug/L	09/25/2015 1055
Methylcyclohexane	ND		1	5.0	0.16	ug/L	09/25/2015 1055
Methylene chloride	ND		1	5.0	0.42	ug/L	09/25/2015 1055
Styrene	ND		1	5.0	0.13	ug/L	09/25/2015 1055
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.13	ug/L	09/25/2015 1055
Tetrachloroethene	ND		1	5.0	0.22	ug/L	09/25/2015 1055
Toluene	ND		1	5.0	0.24	ug/L	09/25/2015 1055
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.30	ug/L	09/25/2015 1055
1,2,4-Trichlorobenzene	ND		1	5.0	0.13	ug/L	09/25/2015 1055
1,1,2-Trichloroethane	ND		1	5.0	0.22	ug/L	09/25/2015 1055
1,1,1-Trichloroethane	ND		1	5.0	0.24	ug/L	09/25/2015 1055

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: QQ85803-001

Matrix: Aqueous

Batch: 85803

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.16	ug/L	09/25/2015 1055
Trichlorofluoromethane	ND		1	5.0	0.74	ug/L	09/25/2015 1055
Vinyl chloride	ND		1	2.0	0.50	ug/L	09/25/2015 1055
Xylenes (total)	ND		1	5.0	0.32	ug/L	09/25/2015 1055
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		112	70-130				
1,2-Dichloroethane-d4		92	70-130				
Toluene-d8		84	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ85803-002

Matrix: Aqueous

Batch: 85803

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	114	60-140	09/25/2015 0917
Benzene	50	54		1	108	70-130	09/25/2015 0917
Bromodichloromethane	50	56		1	112	70-130	09/25/2015 0917
Bromoform	50	47		1	94	70-130	09/25/2015 0917
Bromomethane (Methyl bromide)	50	53		1	106	60-140	09/25/2015 0917
2-Butanone (MEK)	100	120		1	118	60-140	09/25/2015 0917
Carbon disulfide	50	50		1	101	60-140	09/25/2015 0917
Carbon tetrachloride	50	56		1	112	70-130	09/25/2015 0917
Chlorobenzene	50	53		1	107	70-130	09/25/2015 0917
Chloroethane	50	54		1	107	60-140	09/25/2015 0917
Chloroform	50	50		1	99	70-130	09/25/2015 0917
Chloromethane (Methyl chloride)	50	51		1	103	60-140	09/25/2015 0917
Cyclohexane	50	52		1	105	70-130	09/25/2015 0917
1,2-Dibromo-3-chloropropane (DBCP)	50	57		1	114	70-130	09/25/2015 0917
Dibromochloromethane	50	48		1	97	70-130	09/25/2015 0917
1,2-Dibromoethane (EDB)	50	55		1	111	70-130	09/25/2015 0917
1,4-Dichlorobenzene	50	52		1	104	70-130	09/25/2015 0917
1,3-Dichlorobenzene	50	52		1	105	70-130	09/25/2015 0917
1,2-Dichlorobenzene	50	52		1	103	70-130	09/25/2015 0917
Dichlorodifluoromethane	50	53		1	105	60-140	09/25/2015 0917
1,2-Dichloroethane	50	54		1	107	70-130	09/25/2015 0917
1,1-Dichloroethane	50	56		1	111	70-130	09/25/2015 0917
trans-1,2-Dichloroethene	50	55		1	111	70-130	09/25/2015 0917
cis-1,2-Dichloroethene	50	56		1	113	70-130	09/25/2015 0917
1,1-Dichloroethene	50	54		1	107	70-130	09/25/2015 0917
1,2-Dichloropropane	50	57		1	114	70-130	09/25/2015 0917
trans-1,3-Dichloropropene	50	55		1	111	70-130	09/25/2015 0917
cis-1,3-Dichloropropene	50	61		1	122	70-130	09/25/2015 0917
Ethylbenzene	50	56		1	112	70-130	09/25/2015 0917
2-Hexanone	100	120		1	116	60-140	09/25/2015 0917
Isopropylbenzene	50	56		1	112	70-130	09/25/2015 0917
Methyl acetate	50	66		1	131	60-140	09/25/2015 0917
Methyl tertiary butyl ether (MTBE)	50	62		1	124	70-130	09/25/2015 0917
4-Methyl-2-pentanone	100	120		1	125	60-140	09/25/2015 0917
Methylcyclohexane	50	53		1	105	70-130	09/25/2015 0917
Methylene chloride	50	52		1	105	70-130	09/25/2015 0917
Styrene	50	60		1	119	70-130	09/25/2015 0917
1,1,2,2-Tetrachloroethane	50	52		1	104	70-130	09/25/2015 0917
Tetrachloroethene	50	52		1	103	70-130	09/25/2015 0917
Toluene	50	54		1	108	70-130	09/25/2015 0917
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	55		1	110	70-130	09/25/2015 0917
1,2,4-Trichlorobenzene	50	61		1	121	70-130	09/25/2015 0917
1,1,2-Trichloroethane	50	52		1	103	70-130	09/25/2015 0917
1,1,1-Trichloroethane	50	55		1	109	70-130	09/25/2015 0917

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: QQ85803-002

Matrix: Aqueous

Batch: 85803

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	52		1	105	70-130	09/25/2015 0917
Trichlorofluoromethane	50	49		1	98	70-130	09/25/2015 0917
Vinyl chloride	50	52		1	104	70-130	09/25/2015 0917
Xylenes (total)	100	110		1	113	70-130	09/25/2015 0917
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		108	70-130				
1,2-Dichloroethane-d4		88	70-130				
Toluene-d8		86	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**



Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 52949

Client AELSON Address 1-1 RESERVICHT DR City Columbia State SC Zip Code 29203 Project Name STAKEPIERS Project No. 6-32730E	Report to Contact Scott Ross Sampler & Signature Printed Name Scott Ross, James Leggett	Telephone No. / E-mail 803 234 4400 Scott.Ross@aelson.com Analysis (Attach list if more space is needed)	Quote No. 803 234 4400 Page 1 of 1	 QI17060	Remnants / Cooler I.D.
Matrix Soil Sludge Air Water Sediment Other		No. of Containers by Parameter Type PCBs HCBs PAHs VOCs SVOCs Metals Other		P.O. No. Date 4-17-15 1145 1115 1140 TRIP BLANK	
Sample ID / Description (Containers for each sample may be combined on one line.) SW-1 (2) SW-2 (2) SW-3 (2) TRIP BLANK		Matrix Soil Sludge Air Water Sediment Other		No. of Containers by Parameter Type PCBs HCBs PAHs VOCs SVOCs Metals Other	
Turn Around Time Required (Prior lab approval required for expedited TAT.) <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)		Sample Disposal <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Dispose by Lab		Possible Hazard Identification <input checked="" type="checkbox"/> Acid <input type="checkbox"/> Alkali <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	
1. Relinquished by Date 9-17-15 Time 1412		1. Received by Date Date Date		CC Requirements (Specify) Date Time Date Time Date Time	
2. Relinquished by Date Time		2. Received by Date Time		Date Time	
3. Relinquished by Date Time		3. Received by Date Time		Date Time	
4. Relinquished by Date Time		4. Laboratory received by Date Time		Date Time	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.					
LAB USE ONLY Received on ice (Celsius) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Ice Pack <input type="checkbox"/> Received Temp. 2.0 °C					

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
 Document Number: F-AD-016
 Revision Number: 17

Page 1 of 1
 Replaces Date: 11/07/14
 Effective Date: 04/30/15

Sample Receipt Checklist (SRC)

Client: AE.com Cooler Inspected by/date: mem/09/17/15 Lot #: Q17060

Means of receipt: <input checked="" type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>25.2</u> °C / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0.0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____ (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	15. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	18. Were bubbles present >"pca-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	24. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC >0.2 mg/L. (If #21 is No)		
SC Drinking Water Project Sample(s) pH verified to be > 2 by _____ Date: _____		
Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>mem</u> Verified by: _____ Date: <u>9/17/15</u>		

Comments:

PHASE I RI WATER WELL DATA

LABORATORY REPORT

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

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STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Montana	CERT0026
Alaska	IN00035	Nebraska	E87775
Arizona	AZ0432	Nevada	IN000352015-1
Arkansas	IN035	New Hampshire*	2124
California	2920	New Mexico	IN00035
Colorado	IN035	New Jersey*	IN598
Colorado Radiochemistry	IN035	New York*	11398
Connecticut	PH-0132	North Carolina	18700
Delaware	IN035	North Dakota	R-035
Florida (Primary AB)*	E87775	Ohio	87775
Georgia	929	Oklahoma	D9508
Hawaii	IN035	Oregon*	IN200001
Idaho	IN00035/E87775	Pennsylvania*	68-00466
Illinois*	200001	Puerto Rico	IN00035
Illinois Microbiology	200001	Rhode Island	LAO00241
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-14-7
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA150003	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	00127
Massachusetts	M-IN035	Washington	C837
Michigan	9926	West Virginia	9927 C
Minnesota*	018-999-338	Wisconsin	999766900
Mississippi	IN035	Wyoming	IN035
Missouri	880		

*NELAP/TNI Recognized Accreditation Bodies



Eaton Analytical

110 South Hill Street
South Bend, IN 46617
Tel: (574) 233-4777
Fax: (574) 233-8207
1 800 332 4345

Laboratory Report

Client: Shealy Environmental Services

Report: 342458

Attn: Nisreen Saikaly
106 Vantage Point Drive
West Columbia, SC 29172

Priority: Standard Written

Status: Final

PWS ID: Not Supplied

Lab ID #: 95005

Copies
to: None

Sample Information					
EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3264320	QF16013 PW-4(2)	524.2	06/16/15 09:50	Client	06/18/15 09:00

Report Summary

Note: Sample containers were provided by the client.

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Kelly Trott at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

Kelly Trott Analytical Services Manager

Authorized Signature

Title

06/24/2015

Date

Client Name: Shealy Environmental Services

Report #: 342458

Sampling Point: QF16013 PW-4(2)

PWS ID: Not Supplied

Volatile Organic Chemicals									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
2990	Benzene	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2993	Bromobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2430	Bromochloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2943	Bromodichloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2942	Bromoform	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2214	Bromomethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2422	n-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2428	sec-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2426	tert-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2982	Carbon tetrachloride	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2989	Chlorobenzene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2216	Chloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2941	Chloroform	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2210	Chloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2965	2-Chlorotoluene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2966	4-Chlorotoluene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2944	Dibromochloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2950	Total Trihalomethanes	524.2	0.08 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2931	1,2-Dibromo-3-chloropropane (DBCP)	524.2	---	0.0002	< 0.0002	mg/L	---	06/23/15 01:11	3264320
2946	1,2-Dibromoethane (EDB)	524.2	---	0.0002	< 0.0002	mg/L	---	06/23/15 01:11	3264320
2408	Dibromomethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2968	1,2-Dichlorobenzene	524.2	0.6 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2967	1,3-Dichlorobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2969	1,4-Dichlorobenzene	524.2	0.075 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2212	Dichlorodifluoromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2978	1,1-Dichloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2980	1,2-Dichloroethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2977	1,1-Dichloroethylene	524.2	0.007 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2380	cis-1,2-Dichloroethylene	524.2	0.07 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2979	trans-1,2-Dichloroethylene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2964	Dichloromethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2983	1,2-Dichloropropane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2412	1,3-Dichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2416	2,2-Dichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2410	1,1-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2228	cis-1,3-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2224	trans-1,3-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2413	1,3-Dichloropropylene, cis & trans	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2992	Ethylbenzene	524.2	0.7 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2246	Hexachlorobutadiene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2994	Isopropylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2030	4-Isopropyltoluene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2251	Methyl-t-butyl ether (MTBE)	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2248	Naphthalene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2998	n-Propylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320

2996	Styrene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2986	1,1,1,2-Tetrachloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2988	1,1,2,2-Tetrachloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2987	Tetrachloroethylene	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2991	Toluene	524.2	1 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2420	1,2,3-Trichlorobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2378	1,2,4-Trichlorobenzene	524.2	0.07 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2981	1,1,1-Trichloroethane	524.2	0.2 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2985	1,1,2-Trichloroethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2984	Trichloroethylene	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2218	Trichlorofluoromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2414	1,2,3-Trichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2418	1,2,4-Trimethylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2424	1,3,5-Trimethylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2976	Vinyl chloride	524.2	0.002 *	0.0002	< 0.0002	mg/L	---	06/23/15 01:11	3264320
2997	1,2-Xylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2963	1,3 + 1,4-Xylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320
2955	Xylenes, Total	524.2	10 *	0.0005	< 0.0005	mg/L	---	06/23/15 01:11	3264320

Compliance monitoring for 1,2-Dibromo-3-chloropropane (DBCP) must be done using EPA method 504.1.

Compliance monitoring for 1,2-Dibromoethane (EDB) must be done using EPA method 504.1.

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.



Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

342458

Number 48985

278597

Client		Telephone No. / E-mail		Quote No.	
Address		Analysis (Attach list if more space is needed)		Page 1 of 1	
City	State	Zip Code	Laboratory Lot Number		
Project Name			Remarks / Cooler I.D.		
Report to Contact		No of Containers by Preservative Type		Remarks / Cooler I.D.	
Sampler's Signature		5035 KIL		3264320	
X Printed Name		NaOH		3264321	
P.O. No.		HCl			
Date		HNO3			
Sample ID / Description		H2SO4			
(Containers for each sample may be combined on one line.)		Unpres.			
PW-400		Aqueous			
trip blank		Non-Aqueous			
Date		Solid			
6/16/15 0950		G-Grab Composite			
6/16/15		Matrix			
-		Aqueous			
		Non-Aqueous			
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LABORATORY REPORT

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

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Arkansas	IN00035	New Hampshire*	2124
California	2920	New Mexico	IN00035
Colorado	IN035	New Jersey*	IN598
Colorado Radiochemistry	IN035	New York*	11398
Connecticut	PH-0132	North Carolina	18700
Delaware	IN035	North Dakota	R-035
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Georgia	929	Oklahoma	D9508
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Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	460275
Massachusetts	M-IN035	Washington	C837
Michigan	9926	West Virginia	9927 C
Minnesota*	018-999-338	Wisconsin	999766900
Mississippi	IN035	Wyoming	IN035
Missouri	880		

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110 South Hill Street
 South Bend, IN 46617
 Tel: (574) 233-4777
 Fax: (574) 233-8207
 1 800 332 4345

Laboratory Report

Client: Shealy Environmental Services
 Attn: Nisreen Saikaly
 106 Vantage Point Drive
 West Columbia, SC 29172

Report: 359890
 Priority: Standard Written
 Status: Final
 PWS ID: Not Supplied
 Lab ID #: 95005

Sample Information					
EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3419922	RC24017 PW4(3)	524.2	03/24/16 09:13	Client	03/25/16 08:30
3419923	RC24017 Boazman(3)	524.2	03/24/16 09:56	Client	03/25/16 08:30
3419924	RC24017 Boazman(3)Dup	524.2	03/24/16 09:56	Client	03/25/16 08:30

Report Summary

Note: Sample containers were provided by the client.

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Kelly Trott at (574) 233-4777.

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Kelly Trott Analytical Services Manager

Authorized Signature

Title

04/04/2016

Date

Client Name: Shealy Environmental Services

Report #: 359890

Sampling Point: RC24017 PW4(3)

PWS ID: Not Supplied

Volatile Organic Chemicals									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
2990	Benzene	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2993	Bromobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2430	Bromochloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2943	Bromodichloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2942	Bromoform	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2214	Bromomethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2422	n-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2428	sec-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2426	tert-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2982	Carbon tetrachloride	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2989	Chlorobenzene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2216	Chloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2941	Chloroform	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2210	Chloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2965	2-Chlorotoluene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2966	4-Chlorotoluene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2944	Dibromochloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2950	Total Trihalomethanes	524.2	0.08 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2931	1,2-Dibromo-3-chloropropane (DBCP)	524.2	---	0.0002	< 0.0002	mg/L	---	03/30/16 12:35	3419922
2946	1,2-Dibromoethane (EDB)	524.2	---	0.0002	< 0.0002	mg/L	---	03/30/16 12:35	3419922
2408	Dibromomethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2968	1,2-Dichlorobenzene	524.2	0.6 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2967	1,3-Dichlorobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2969	1,4-Dichlorobenzene	524.2	0.075 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2212	Dichlorodifluoromethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2978	1,1-Dichloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2980	1,2-Dichloroethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2977	1,1-Dichloroethylene	524.2	0.007 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2380	cis-1,2-Dichloroethylene	524.2	0.07 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2979	trans-1,2-Dichloroethylene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2964	Dichloromethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2983	1,2-Dichloropropane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2412	1,3-Dichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2416	2,2-Dichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2410	1,1-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2228	cis-1,3-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2224	trans-1,3-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2413	1,3-Dichloropropylene, cis & trans	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2992	Ethylbenzene	524.2	0.7 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2246	Hexachlorobutadiene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2994	Isopropylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2030	4-Isopropyltoluene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2251	Methyl-t-butyl ether (MTBE)	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2248	Naphthalene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2998	n-Propylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922

2996	Styrene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2986	1,1,1,2-Tetrachloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2988	1,1,2,2-Tetrachloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2987	Tetrachloroethylene	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2991	Toluene	524.2	1 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2420	1,2,3-Trichlorobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2378	1,2,4-Trichlorobenzene	524.2	0.07 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2981	1,1,1-Trichloroethane	524.2	0.2 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2985	1,1,2-Trichloroethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2984	Trichloroethylene	524.2	0.005 *	0.0005	0.0009	mg/L	---	03/30/16 12:35	3419922
2218	Trichlorofluoromethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2414	1,2,3-Trichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2418	1,2,4-Trimethylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2424	1,3,5-Trimethylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2976	Vinyl chloride	524.2	0.002 *	0.0002	< 0.0002	mg/L	---	03/30/16 12:35	3419922
2997	1,2-Xylene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2963	1,3 + 1,4-Xylene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922
2955	Xylenes, Total	524.2	10 *	0.0005	< 0.0005	mg/L	---	03/30/16 12:35	3419922

Compliance monitoring for 1,2-Dibromo-3-chloropropane (DBCP) must be done using EPA method 504.1.

Compliance monitoring for 1,2-Dibromoethane (EDB) must be done using EPA method 504.1.

Sampling Point: RC24017 Boazman(3)

PWS ID: Not Supplied

Volatile Organic Chemicals									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
2990	Benzene	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2993	Bromobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2430	Bromochloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2943	Bromodichloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2942	Bromoform	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2214	Bromomethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2422	n-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2428	sec-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2426	tert-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2982	Carbon tetrachloride	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2989	Chlorobenzene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2216	Chloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2941	Chloroform	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2210	Chloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2965	2-Chlorotoluene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2966	4-Chlorotoluene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2944	Dibromochloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2950	Total Trihalomethanes	524.2	0.08 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2931	1,2-Dibromo-3-chloropropane (DBCP)	524.2	---	0.0002	< 0.0002	mg/L	---	03/30/16 13:09	3419923
2946	1,2-Dibromoethane (EDB)	524.2	---	0.0002	< 0.0002	mg/L	---	03/30/16 13:09	3419923
2408	Dibromomethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2968	1,2-Dichlorobenzene	524.2	0.6 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2967	1,3-Dichlorobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2969	1,4-Dichlorobenzene	524.2	0.075 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2212	Dichlorodifluoromethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2978	1,1-Dichloroethane	524.2	---	0.0005	0.0008	mg/L	---	03/30/16 13:09	3419923
2980	1,2-Dichloroethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2977	1,1-Dichloroethylene	524.2	0.007 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2380	cis-1,2-Dichloroethylene	524.2	0.07 *	0.0005	0.0014	mg/L	---	03/30/16 13:09	3419923
2979	trans-1,2-Dichloroethylene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2964	Dichloromethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2983	1,2-Dichloropropane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2412	1,3-Dichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2416	2,2-Dichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2410	1,1-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2228	cis-1,3-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2224	trans-1,3-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2413	1,3-Dichloropropylene, cis & trans	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2992	Ethylbenzene	524.2	0.7 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2246	Hexachlorobutadiene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2994	Isopropylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2030	4-Isopropyltoluene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2251	Methyl-t-butyl ether (MTBE)	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2248	Naphthalene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2998	n-Propylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923

2996	Styrene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2986	1,1,1,2-Tetrachloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2988	1,1,2,2-Tetrachloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2987	Tetrachloroethylene	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2991	Toluene	524.2	1 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2420	1,2,3-Trichlorobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2378	1,2,4-Trichlorobenzene	524.2	0.07 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2981	1,1,1-Trichloroethane	524.2	0.2 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2985	1,1,2-Trichloroethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2984	Trichloroethylene	524.2	0.005 *	0.0005	0.0011	mg/L	---	03/30/16 13:09	3419923
2218	Trichlorofluoromethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2414	1,2,3-Trichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2418	1,2,4-Trimethylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2424	1,3,5-Trimethylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2976	Vinyl chloride	524.2	0.002 *	0.0002	< 0.0002	mg/L	---	03/30/16 13:09	3419923
2997	1,2-Xylene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2963	1,3 + 1,4-Xylene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923
2955	Xylenes, Total	524.2	10 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:09	3419923

Compliance monitoring for 1,2-Dibromo-3-chloropropane (DBCP) must be done using EPA method 504.1.

Compliance monitoring for 1,2-Dibromoethane (EDB) must be done using EPA method 504.1.

Sampling Point: RC24017 Boazman(3)Dup

PWS ID: Not Supplied

Volatile Organic Chemicals									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
2990	Benzene	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2993	Bromobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2430	Bromochloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2943	Bromodichloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2942	Bromoform	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2214	Bromomethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2422	n-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2428	sec-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2426	tert-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2982	Carbon tetrachloride	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2989	Chlorobenzene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2216	Chloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2941	Chloroform	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2210	Chloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2965	2-Chlorotoluene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2966	4-Chlorotoluene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2944	Dibromochloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2950	Total Trihalomethanes	524.2	0.08 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2931	1,2-Dibromo-3-chloropropane (DBCP)	524.2	---	0.0002	< 0.0002	mg/L	---	03/30/16 13:42	3419924
2946	1,2-Dibromoethane (EDB)	524.2	---	0.0002	< 0.0002	mg/L	---	03/30/16 13:42	3419924
2408	Dibromomethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2968	1,2-Dichlorobenzene	524.2	0.6 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2967	1,3-Dichlorobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2969	1,4-Dichlorobenzene	524.2	0.075 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2212	Dichlorodifluoromethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2978	1,1-Dichloroethane	524.2	---	0.0005	0.0008	mg/L	---	03/30/16 13:42	3419924
2980	1,2-Dichloroethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2977	1,1-Dichloroethylene	524.2	0.007 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2380	cis-1,2-Dichloroethylene	524.2	0.07 *	0.0005	0.0014	mg/L	---	03/30/16 13:42	3419924
2979	trans-1,2-Dichloroethylene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2964	Dichloromethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2983	1,2-Dichloropropane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2412	1,3-Dichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2416	2,2-Dichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2410	1,1-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2228	cis-1,3-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2224	trans-1,3-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2413	1,3-Dichloropropylene, cis & trans	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2992	Ethylbenzene	524.2	0.7 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2246	Hexachlorobutadiene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2994	Isopropylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2030	4-Isopropyltoluene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2251	Methyl-t-butyl ether (MTBE)	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2248	Naphthalene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2998	n-Propylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924

2996	Styrene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2986	1,1,1,2-Tetrachloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2988	1,1,2,2-Tetrachloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2987	Tetrachloroethylene	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2991	Toluene	524.2	1 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2420	1,2,3-Trichlorobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2378	1,2,4-Trichlorobenzene	524.2	0.07 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2981	1,1,1-Trichloroethane	524.2	0.2 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2985	1,1,2-Trichloroethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2984	Trichloroethylene	524.2	0.005 *	0.0005	0.0011	mg/L	---	03/30/16 13:42	3419924
2218	Trichlorofluoromethane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2414	1,2,3-Trichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2418	1,2,4-Trimethylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2424	1,3,5-Trimethylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2976	Vinyl chloride	524.2	0.002 *	0.0002	< 0.0002	mg/L	---	03/30/16 13:42	3419924
2997	1,2-Xylene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2963	1,3 + 1,4-Xylene	524.2	---	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924
2955	Xylenes, Total	524.2	10 *	0.0005	< 0.0005	mg/L	---	03/30/16 13:42	3419924

Compliance monitoring for 1,2-Dibromo-3-chloropropane (DBCP) must be done using EPA method 504.1.

Compliance monitoring for 1,2-Dibromoethane (EDB) must be done using EPA method 504.1.

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis. CCL, CCM, and CCH are the CCC standards at low, mid, and high concentration levels, respectively.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control. FBL, FBM, and FBH are the LFB samples at low, mid, and high concentration levels, respectively.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix. SDL, SDM, and SDH / LFSMDL, LFSMDM, and LFSMDH are the MSD or LFSMD at low, mid, and high concentration levels, respectively.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results. MSL, MSM, and MSH / LFSML, LFSMM, and LFSMH are the MS or LFSM at low, mid, and high concentration levels, respectively.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package QG08070 were collected on July 7-8, 2015 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Metals by Methods 6010C/7470B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package QG09023 were collected on July 8-9, 2015 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of Trichloroethene in sample TMW-30 were qualified “/M/m” due to low recovery in the associated matrix spike sample below the established criteria of 40-160% (-178%). These qualifiers indicate the results should be considered biased low.

Data Summary and Usability

The QC excursions encountered during the validation of this data set did not result in the rejection of any data. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

- United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.
- United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.
- United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package QH04060 were collected on August 3-4, 2015 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package QH06108 were collected on August 5-6, 2015 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package QH11036 were collected on August 10-11, 2015 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
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- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of benzene, bromomethane, carbon tetrachloride, chlorobenzene, chloroethane, dibromochloromethane, 1,2-dibromoethane, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, dichlorodifluoromethane, 1,1-dichloroethene, ethylbenzene, isopropylbenzene, methylcyclohexane, 1,1,2,2-tetrachloroethane, tetrachloroethene, toluene, 1,1,2-trichloro-1,2,2-trifluoroethane, 1,2,4-trichlorobenzene, 1,1,2-trichloroethane, trichloroethene, trichlorofluoromethane, vinyl chloride, and xylenes in sample MW-16 were qualified “/M/M” due to matrix spike recovery above the established criteria of 40-160% (161, 165, 170, 165, 171, 164, 166, 165, 165, 163, 175, 163, 174, 171, 167, 161, 183, 168, 172, 164, 163, 165, 176, 171, and 167%, respectively). These qualifiers indicate the results should be considered biased high.

Results of all compounds in sample MW-16 were qualified “/M/D” due to the relative percent difference between the matrix spike and matrix spike duplicate samples exceeding the established criteria of 35%. These qualifiers indicate imprecision with laboratory methodology, instrumentation, or matrix interference.

Data Summary and Usability

The QC excursions encountered during the validation of this data set did not result in the rejection of any data. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

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- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package QH13026 were collected on August 12-13, 2015 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package QH18021 were collected on August 18, 2015 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package QH27050 were collected on August 26-27, 2015 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Detection of chloroform associated with preparatory batch 84037 and less than 1.15 µg/L were qualified “/B/K” due to the presence of the analyte in the associated method blank sample. The analyte is not considered site-related per EPA data evaluation guidance.

Data Summary and Usability

The QC excursions encountered during the validation of this data set did not result in the rejection of any data. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

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- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package QI08038 were collected on September 8, 2015 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package QI11015 were collected on September 11, 2015 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package QL17089 were collected on December 14-15, 2015 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of chloroform associated with preparatory batch 92992 and $< 1.45 \mu\text{g/L}$ were qualified “/B/K” due to the presence of the analyte in the associated method blank sample.

Data Summary and Usability

The QC excursions encountered during the validation of this data set did not result in the rejection of any data. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package RA13091 were collected on January 13, 2016 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

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DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package RB24001 were collected on February 23, 2016 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

All results were qualified “//y” due to a cooler temperature greater than 6 °C.

Data Summary and Usability

The QC excursions encountered during the validation of this data set did not result in the rejection of any data. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package RB26034 were collected on February 26, 2016 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

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- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package RC03069 were collected on March 3, 2016 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

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- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package RD26033 were collected on April 25-26, 2016 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package QL17089 were collected on December 14-15, 2015 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of chloroform associated with preparatory batch 92992 and $< 1.45 \mu\text{g/L}$ were qualified “/B/K” due to the presence of the analyte in the associated method blank sample.

Data Summary and Usability

The QC excursions encountered during the validation of this data set did not result in the rejection of any data. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package RA13091 were collected on January 13, 2016 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

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DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

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- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package RB24001 were collected on February 23, 2016 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

All results were qualified “//y” due to a cooler temperature greater than 6 °C.

Data Summary and Usability

The QC excursions encountered during the validation of this data set did not result in the rejection of any data. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package RB26034 were collected on February 26, 2016 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package RC03069 were collected on March 3, 2016 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package RD26033 were collected on April 25-26, 2016 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

PHASE II RI DATA PACKAGES

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare - Phase 2 RI**

Project Number: **60534283**

Lot Number: **SF06080**

Date Completed: **06/08/2017**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: SF06080

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: SF06080

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-191 (19/23)	Aqueous	06/06/2017 1015	06/06/2017

(1 sample)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: SF06080

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-19I (19/23)	Aqueous	Acetone	8260B	6.5	J	ug/L	5

(1 detection)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF06080-001
Description: MW-19I (19/23)	Matrix: Aqueous
Date Sampled: 06/06/2017 1015	
Date Received: 06/06/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/07/2017 1147	ALL		43680

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	6.5	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF06080-001
Description: MW-19I (19/23)	Matrix: Aqueous
Date Sampled: 06/06/2017 1015	
Date Received: 06/06/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/07/2017 1147	ALL		43680

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	70-130
Bromofluorobenzene		104	70-130
Toluene-d8		95	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ43680-001

Matrix: Aqueous

Batch: 43680

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	06/07/2017 0926
Benzene	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Bromodichloromethane	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Bromoform	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	06/07/2017 0926
2-Butanone (MEK)	ND		1	10	2.0	ug/L	06/07/2017 0926
Carbon disulfide	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Chlorobenzene	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Chloroethane	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Chloroform	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Cyclohexane	ND		1	5.0	0.40	ug/L	06/07/2017 0926
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Dibromochloromethane	ND		1	5.0	0.40	ug/L	06/07/2017 0926
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	06/07/2017 0926
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/07/2017 0926
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/07/2017 0926
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	06/07/2017 0926
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	06/07/2017 0926
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	06/07/2017 0926
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/07/2017 0926
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	06/07/2017 0926
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/07/2017 0926
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	06/07/2017 0926
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/07/2017 0926
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Ethylbenzene	ND		1	5.0	0.40	ug/L	06/07/2017 0926
2-Hexanone	ND		1	10	2.0	ug/L	06/07/2017 0926
Isopropylbenzene	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Methyl acetate	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	06/07/2017 0926
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	06/07/2017 0926
Methylcyclohexane	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Methylene chloride	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Styrene	ND		1	5.0	0.41	ug/L	06/07/2017 0926
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Tetrachloroethene	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Toluene	ND		1	5.0	0.40	ug/L	06/07/2017 0926
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	06/07/2017 0926
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	06/07/2017 0926
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	06/07/2017 0926
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	06/07/2017 0926

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ43680-001

Matrix: Aqueous

Batch: 43680

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Vinyl chloride	ND		1	2.0	0.40	ug/L	06/07/2017 0926
Xylenes (total)	ND		1	5.0	0.40	ug/L	06/07/2017 0926
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		104	70-130				
1,2-Dichloroethane-d4		85	70-130				
Toluene-d8		95	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ43680-002

Matrix: Aqueous

Batch: 43680

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	120		1	116	60-140	06/07/2017 0831
Benzene	50	47		1	95	70-130	06/07/2017 0831
Bromodichloromethane	50	48		1	95	70-130	06/07/2017 0831
Bromoform	50	49		1	98	70-130	06/07/2017 0831
Bromomethane (Methyl bromide)	50	59		1	117	70-130	06/07/2017 0831
2-Butanone (MEK)	100	96		1	96	70-130	06/07/2017 0831
Carbon disulfide	50	48		1	97	70-130	06/07/2017 0831
Carbon tetrachloride	50	46		1	92	70-130	06/07/2017 0831
Chlorobenzene	50	49		1	98	70-130	06/07/2017 0831
Chloroethane	50	49		1	99	70-130	06/07/2017 0831
Chloroform	50	47		1	94	70-130	06/07/2017 0831
Chloromethane (Methyl chloride)	50	46		1	93	60-140	06/07/2017 0831
Cyclohexane	50	46		1	92	70-130	06/07/2017 0831
1,2-Dibromo-3-chloropropane (DBCP)	50	46		1	92	70-130	06/07/2017 0831
Dibromochloromethane	50	49		1	99	70-130	06/07/2017 0831
1,2-Dibromoethane (EDB)	50	47		1	94	70-130	06/07/2017 0831
1,2-Dichlorobenzene	50	48		1	96	70-130	06/07/2017 0831
1,3-Dichlorobenzene	50	47		1	95	70-130	06/07/2017 0831
1,4-Dichlorobenzene	50	47		1	95	70-130	06/07/2017 0831
Dichlorodifluoromethane	50	63		1	126	60-140	06/07/2017 0831
1,2-Dichloroethane	50	47		1	94	70-130	06/07/2017 0831
1,1-Dichloroethane	50	45		1	90	70-130	06/07/2017 0831
trans-1,2-Dichloroethene	50	48		1	96	70-130	06/07/2017 0831
1,1-Dichloroethene	50	50		1	99	70-130	06/07/2017 0831
cis-1,2-Dichloroethene	50	46		1	92	70-130	06/07/2017 0831
1,2-Dichloropropane	50	47		1	94	70-130	06/07/2017 0831
cis-1,3-Dichloropropene	50	49		1	98	70-130	06/07/2017 0831
trans-1,3-Dichloropropene	50	47		1	94	70-130	06/07/2017 0831
Ethylbenzene	50	49		1	98	70-130	06/07/2017 0831
2-Hexanone	100	85		1	85	70-130	06/07/2017 0831
Isopropylbenzene	50	50		1	100	70-130	06/07/2017 0831
Methyl acetate	50	47		1	94	70-130	06/07/2017 0831
Methyl tertiary butyl ether (MTBE)	50	39		1	77	70-130	06/07/2017 0831
4-Methyl-2-pentanone	100	87		1	87	70-130	06/07/2017 0831
Methylcyclohexane	50	51		1	102	70-130	06/07/2017 0831
Methylene chloride	50	42		1	85	70-130	06/07/2017 0831
Styrene	50	50		1	100	70-130	06/07/2017 0831
1,1,2,2-Tetrachloroethane	50	47		1	94	70-130	06/07/2017 0831
Tetrachloroethene	50	49		1	99	70-130	06/07/2017 0831
Toluene	50	49		1	97	70-130	06/07/2017 0831
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	49		1	99	70-130	06/07/2017 0831
1,2,4-Trichlorobenzene	50	44		1	88	70-130	06/07/2017 0831
1,1,2-Trichloroethane	50	46		1	92	70-130	06/07/2017 0831
1,1,1-Trichloroethane	50	46		1	93	70-130	06/07/2017 0831

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ43680-002

Matrix: Aqueous

Batch: 43680

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	49		1	98	70-130	06/07/2017 0831
Trichlorofluoromethane	50	47		1	94	70-130	06/07/2017 0831
Vinyl chloride	50	50		1	100	70-130	06/07/2017 0831
Xylenes (total)	100	97		1	97	70-130	06/07/2017 0831
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		105	70-130				
1,2-Dichloroethane-d4		87	70-130				
Toluene-d8		99	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-08

Page 1 of 1
Effective Date: 03/07/2017
Expiry Date: 03/07/2022

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: CTT/6/17 Lot #: SFO6082

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
pH strip ID: <u>NA</u> CI strip ID: _____		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>50.5.0c</u> / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA (< 0.5mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	22. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) <u>001</u> were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.5 mg/L (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: _____		
SC Drinking Water Project Sample(s) pH verified to be < 2 by _____ Date: _____		
Sample(s) _____ were Not received at a pH of < 2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>CTT</u> Verified by: _____ Date: <u>6/17</u>		

Comments: _____

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare - RI**

Project Number: **60534283**

Lot Number: **SF08061**

Date Completed: **06/13/2017**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: SF08061

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Volatile Organic Compounds

The laboratory control sample (LCS) for analytical batch 43960 exceeded acceptance criteria for the following analytes: Acetone, 2-Butanone. These analytes were biased high and were not detected in the samples affected: SF08061-001, SF08061-002, -003, -004.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: SF08061

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-14I (24FT)	Aqueous	06/08/2017 1300	06/08/2017
002	MW-12I (32-36FT)	Aqueous	06/08/2017 0150	06/08/2017
003	MW-12I (41-45FT)	Aqueous	06/08/2017 1550	06/08/2017
004	MW-12I (51-55FT)	Aqueous	06/08/2017 1640	06/08/2017

(4 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: SF08061

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-14I (24FT)	Aqueous	Acetone	8260B	18	J	ug/L	5
001	MW-14I (24FT)	Aqueous	cis-1,2-Dichloroethene	8260B	1.1	J	ug/L	5
001	MW-14I (24FT)	Aqueous	Trichloroethene	8260B	47		ug/L	6
002	MW-12I (32-36FT)	Aqueous	Acetone	8260B	8.3	J	ug/L	7
002	MW-12I (32-36FT)	Aqueous	cis-1,2-Dichloroethene	8260B	5.4		ug/L	7
002	MW-12I (32-36FT)	Aqueous	Trichloroethene	8260B	1.4	J	ug/L	8
003	MW-12I (41-45FT)	Aqueous	Benzene	8260B	0.66	J	ug/L	9
003	MW-12I (41-45FT)	Aqueous	2-Butanone (MEK)	8260B	3.8	J	ug/L	9
003	MW-12I (41-45FT)	Aqueous	cis-1,2-Dichloroethene	8260B	3.8	J	ug/L	9
003	MW-12I (41-45FT)	Aqueous	Toluene	8260B	0.89	J	ug/L	9
003	MW-12I (41-45FT)	Aqueous	Trichloroethene	8260B	0.46	J	ug/L	10
004	MW-12I (51-55FT)	Aqueous	Acetone	8260B	30		ug/L	11
004	MW-12I (51-55FT)	Aqueous	Benzene	8260B	0.41	J	ug/L	11
004	MW-12I (51-55FT)	Aqueous	2-Butanone (MEK)	8260B	7.1	J	ug/L	11
004	MW-12I (51-55FT)	Aqueous	cis-1,2-Dichloroethene	8260B	2.0	J	ug/L	11
004	MW-12I (51-55FT)	Aqueous	Styrene	8260B	0.45	J	ug/L	11
004	MW-12I (51-55FT)	Aqueous	Toluene	8260B	0.54	J	ug/L	11

(17 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF08061-001
Description: MW-14I (24FT)	Matrix: Aqueous
Date Sampled: 06/08/2017 1300	
Date Received: 06/08/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/09/2017 2307	ECP		43960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	18	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	1.1	J	5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF08061-001
Description: MW-14I (24FT)	Matrix: Aqueous
Date Sampled: 06/08/2017 1300	
Date Received: 06/08/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/09/2017 2307	ECP		43960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	47		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		104	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF08061-002
Description: MW-12I (32-36FT)	Matrix: Aqueous
Date Sampled: 06/08/2017 0150	
Date Received: 06/08/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/09/2017 2330	ECP		43960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	8.3	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	5.4		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF08061-002
Description: MW-12I (32-36FT)	Matrix: Aqueous
Date Sampled: 06/08/2017 0150	
Date Received: 06/08/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/09/2017 2330	ECP		43960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	1.4	J	5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF08061-003
Description: MW-12I (41-45FT)	Matrix: Aqueous
Date Sampled: 06/08/2017 1550	
Date Received: 06/08/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/09/2017 2354	ECP		43960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	0.66	J	5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	3.8	J	10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	3.8	J	5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	0.89	J	5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF08061-003
Description: MW-12I (41-45FT)	Matrix: Aqueous
Date Sampled: 06/08/2017 1550	
Date Received: 06/08/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/09/2017 2354	ECP		43960

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	0.46	J	5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		102	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

 Client: **AECOM**

 Laboratory ID: **SF08061-004**

 Description: **MW-12I (51-55FT)**

 Matrix: **Aqueous**

 Date Sampled: **06/08/2017 1640**

 Date Received: **06/08/2017**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/10/2017 0018	ECP		43960
2	5030B	8260B	1	06/13/2017 0115	JJG		44081

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	30		20	2.0	ug/L	2
Benzene	71-43-2	8260B	0.41	J	5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	7.1	J	10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	2.0	J	5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	0.45	J	5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	0.54	J	5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF08061-004
Description: MW-12I (51-55FT)	Matrix: Aqueous
Date Sampled: 06/08/2017 1640	
Date Received: 06/08/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/10/2017 0018	ECP		43960
2	5030B	8260B	1	06/13/2017 0115	JJG		44081

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130		95	70-130
Bromofluorobenzene		104	70-130		102	70-130
Toluene-d8		99	70-130		98	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ43960-001

Matrix: Aqueous

Batch: 43960

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	06/09/2017 2137
Benzene	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Bromodichloromethane	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Bromoform	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	06/09/2017 2137
2-Butanone (MEK)	ND		1	10	2.0	ug/L	06/09/2017 2137
Carbon disulfide	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Chlorobenzene	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Chloroethane	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Chloroform	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Cyclohexane	ND		1	5.0	0.40	ug/L	06/09/2017 2137
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Dibromochloromethane	ND		1	5.0	0.40	ug/L	06/09/2017 2137
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	06/09/2017 2137
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/09/2017 2137
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/09/2017 2137
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	06/09/2017 2137
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	06/09/2017 2137
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	06/09/2017 2137
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/09/2017 2137
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/09/2017 2137
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	06/09/2017 2137
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	06/09/2017 2137
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/09/2017 2137
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Ethylbenzene	ND		1	5.0	0.40	ug/L	06/09/2017 2137
2-Hexanone	ND		1	10	2.0	ug/L	06/09/2017 2137
Isopropylbenzene	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Methyl acetate	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	06/09/2017 2137
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	06/09/2017 2137
Methylcyclohexane	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Methylene chloride	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Styrene	ND		1	5.0	0.41	ug/L	06/09/2017 2137
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Tetrachloroethene	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Toluene	ND		1	5.0	0.40	ug/L	06/09/2017 2137
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	06/09/2017 2137
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	06/09/2017 2137
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	06/09/2017 2137
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	06/09/2017 2137

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ43960-001

Matrix: Aqueous

Batch: 43960

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Vinyl chloride	ND		1	2.0	0.40	ug/L	06/09/2017 2137
Xylenes (total)	ND		1	5.0	0.40	ug/L	06/09/2017 2137
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		104	70-130				
1,2-Dichloroethane-d4		101	70-130				
Toluene-d8		101	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ43960-002

Matrix: Aqueous

Batch: 43960

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	40	75	N	1	188	60-140	06/09/2017 2038
Benzene	20	21		1	106	70-130	06/09/2017 2038
Bromodichloromethane	20	20		1	102	70-130	06/09/2017 2038
Bromoform	20	20		1	98	70-130	06/09/2017 2038
Bromomethane (Methyl bromide)	20	25		1	124	70-130	06/09/2017 2038
2-Butanone (MEK)	40	56	N	1	140	70-130	06/09/2017 2038
Carbon disulfide	20	20		1	99	70-130	06/09/2017 2038
Carbon tetrachloride	20	20		1	98	70-130	06/09/2017 2038
Chlorobenzene	20	20		1	102	70-130	06/09/2017 2038
Chloroethane	20	25		1	126	70-130	06/09/2017 2038
Chloroform	20	20		1	102	70-130	06/09/2017 2038
Chloromethane (Methyl chloride)	20	24		1	120	60-140	06/09/2017 2038
Cyclohexane	20	20		1	102	70-130	06/09/2017 2038
1,2-Dibromo-3-chloropropane (DBCP)	20	19		1	95	70-130	06/09/2017 2038
Dibromochloromethane	20	20		1	98	70-130	06/09/2017 2038
1,2-Dibromoethane (EDB)	20	20		1	100	70-130	06/09/2017 2038
1,4-Dichlorobenzene	20	21		1	105	70-130	06/09/2017 2038
1,3-Dichlorobenzene	20	20		1	102	70-130	06/09/2017 2038
1,2-Dichlorobenzene	20	21		1	104	70-130	06/09/2017 2038
Dichlorodifluoromethane	20	27		1	133	60-140	06/09/2017 2038
1,2-Dichloroethane	20	21		1	103	70-130	06/09/2017 2038
1,1-Dichloroethane	20	20		1	102	70-130	06/09/2017 2038
trans-1,2-Dichloroethene	20	20		1	100	70-130	06/09/2017 2038
cis-1,2-Dichloroethene	20	19		1	97	70-130	06/09/2017 2038
1,1-Dichloroethene	20	20		1	99	70-130	06/09/2017 2038
1,2-Dichloropropane	20	22		1	110	70-130	06/09/2017 2038
trans-1,3-Dichloropropene	20	19		1	97	70-130	06/09/2017 2038
cis-1,3-Dichloropropene	20	21		1	107	70-130	06/09/2017 2038
Ethylbenzene	20	21		1	106	70-130	06/09/2017 2038
2-Hexanone	40	44		1	109	70-130	06/09/2017 2038
Isopropylbenzene	20	22		1	108	70-130	06/09/2017 2038
Methyl acetate	20	17		1	83	70-130	06/09/2017 2038
Methyl tertiary butyl ether (MTBE)	20	16		1	82	70-130	06/09/2017 2038
4-Methyl-2-pentanone	40	43		1	108	70-130	06/09/2017 2038
Methylcyclohexane	20	21		1	106	70-130	06/09/2017 2038
Methylene chloride	20	18		1	91	70-130	06/09/2017 2038
Styrene	20	21		1	103	70-130	06/09/2017 2038
1,1,2,2-Tetrachloroethane	20	19		1	95	70-130	06/09/2017 2038
Tetrachloroethene	20	22		1	109	70-130	06/09/2017 2038
Toluene	20	21		1	104	70-130	06/09/2017 2038
1,1,2-Trichloro-1,2,2-Trifluoroethane	20	20		1	98	70-130	06/09/2017 2038
1,2,4-Trichlorobenzene	20	21		1	104	70-130	06/09/2017 2038
1,1,2-Trichloroethane	20	20		1	99	70-130	06/09/2017 2038
1,1,1-Trichloroethane	20	20		1	99	70-130	06/09/2017 2038

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ43960-002

Matrix: Aqueous

Batch: 43960

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	20	21		1	104	70-130	06/09/2017 2038
Trichlorofluoromethane	20	21		1	105	70-130	06/09/2017 2038
Vinyl chloride	20	24		1	119	70-130	06/09/2017 2038
Xylenes (total)	40	41		1	103	70-130	06/09/2017 2038
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		107			70-130		
1,2-Dichloroethane-d4		97			70-130		
Toluene-d8		101			70-130		

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ44081-001

Matrix: Aqueous

Batch: 44081

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	06/12/2017 2328
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		99	70-130				
1,2-Dichloroethane-d4		97	70-130				
Toluene-d8		96	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ44081-002

Matrix: Aqueous

Batch: 44081

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	97		1	97	60-140	06/12/2017 2121
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		104	70-130				
1,2-Dichloroethane-d4		97	70-130				
Toluene-d8		100	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-08

Page 1 of 1
Effective Date: 03/07/2017
Expiry Date: 03/07/2022

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: CLT/6/17/17 Lot #: SF080061

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other _____		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 2. If custody seals were present, were they intact and unbroken?
pH strip ID: <u>NA</u> Cl strip ID: _____		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>72700</u> / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/> 3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone (email / face-to-face (circle one)).
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/> 16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 17. Were all DRO/metals/nutrient samples received at a pH of < 2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 19. Were all applicable NH3/TKN/cyanide/phenol/BNA (< 0.5mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	22. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) <u>005, 004</u> were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.5 mg/L (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: _____		
SC Drinking Water Project Sample(s) pH verified to be < 2 by _____ Date: _____		
Sample(s) _____ were Not received at a pH of < 2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>CLT</u> Verified by: _____ Date: <u>6/17/17</u>		

Comments: _____

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare - RI**

Project Number: **60318382.Task5**

Lot Number: **SF12045**

Date Completed: **06/14/2017**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: SF12045

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: SF12045

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	TMW 117 (21-25ft)	Aqueous	06/12/2017 1530	06/12/2017
002	TMW 118 (30-34ft)	Aqueous	06/12/2017 1620	06/12/2017

(2 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: SF12045

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	TMW 117 (21-25ft)	Aqueous	Acetone	8260B	35		ug/L	5
001	TMW 117 (21-25ft)	Aqueous	2-Butanone (MEK)	8260B	2.1	J	ug/L	5
002	TMW 118 (30-34ft)	Aqueous	Acetone	8260B	12	J	ug/L	7

(3 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF12045-001
Description: TMW 117 (21-25ft)	Matrix: Aqueous
Date Sampled: 06/12/2017 1530	
Date Received: 06/12/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/13/2017 1029	TML		44098
2	5030B	8260B	1	06/13/2017 2206	JJG		44183

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	35		20	2.0	ug/L	2
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	2.1	J	10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF12045-001
Description: TMW 117 (21-25ft)	Matrix: Aqueous
Date Sampled: 06/12/2017 1530	
Date Received: 06/12/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/13/2017 1029	TML		44098
2	5030B	8260B	1	06/13/2017 2206	JJG		44183

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	70-130		90	70-130
Bromofluorobenzene		99	70-130		94	70-130
Toluene-d8		93	70-130		98	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF12045-002
Description: TMW 118 (30-34ft)	Matrix: Aqueous
Date Sampled: 06/12/2017 1620	
Date Received: 06/12/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/13/2017 1050	TML		44098
2	5030B	8260B	1	06/13/2017 2229	JJG		44183

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	12	J	20	2.0	ug/L	2
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF12045-002
Description: TMW 118 (30-34ft)	Matrix: Aqueous
Date Sampled: 06/12/2017 1620	
Date Received: 06/12/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/13/2017 1050	TML		44098
2	5030B	8260B	1	06/13/2017 2229	JJG		44183

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	70-130		90	70-130
Bromofluorobenzene		98	70-130		94	70-130
Toluene-d8		93	70-130		98	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ44098-001

Matrix: Aqueous

Batch: 44098

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Bromodichloromethane	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Bromoform	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	06/13/2017 0955
2-Butanone (MEK)	ND		1	10	2.0	ug/L	06/13/2017 0955
Carbon disulfide	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Chlorobenzene	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Chloroethane	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Chloroform	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Cyclohexane	ND		1	5.0	0.40	ug/L	06/13/2017 0955
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Dibromochloromethane	ND		1	5.0	0.40	ug/L	06/13/2017 0955
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	06/13/2017 0955
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/13/2017 0955
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/13/2017 0955
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	06/13/2017 0955
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	06/13/2017 0955
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	06/13/2017 0955
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/13/2017 0955
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/13/2017 0955
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	06/13/2017 0955
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	06/13/2017 0955
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/13/2017 0955
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Ethylbenzene	ND		1	5.0	0.40	ug/L	06/13/2017 0955
2-Hexanone	ND		1	10	2.0	ug/L	06/13/2017 0955
Isopropylbenzene	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Methyl acetate	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	06/13/2017 0955
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	06/13/2017 0955
Methylcyclohexane	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Methylene chloride	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Styrene	ND		1	5.0	0.41	ug/L	06/13/2017 0955
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Tetrachloroethene	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Toluene	ND		1	5.0	0.40	ug/L	06/13/2017 0955
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	06/13/2017 0955
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	06/13/2017 0955
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	06/13/2017 0955
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Trichloroethene	ND		1	5.0	0.40	ug/L	06/13/2017 0955

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ44098-001

Matrix: Aqueous

Batch: 44098

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Vinyl chloride	ND		1	2.0	0.40	ug/L	06/13/2017 0955
Xylenes (total)	ND		1	5.0	0.40	ug/L	06/13/2017 0955
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		100	70-130				
1,2-Dichloroethane-d4		89	70-130				
Toluene-d8		93	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ44098-002

Matrix: Aqueous

Batch: 44098

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	52		1	103	70-130	06/13/2017 0900
Bromodichloromethane	50	52		1	105	70-130	06/13/2017 0900
Bromoform	50	52		1	103	70-130	06/13/2017 0900
Bromomethane (Methyl bromide)	50	61		1	122	70-130	06/13/2017 0900
2-Butanone (MEK)	100	110		1	112	70-130	06/13/2017 0900
Carbon disulfide	50	59		1	118	70-130	06/13/2017 0900
Carbon tetrachloride	50	56		1	112	70-130	06/13/2017 0900
Chlorobenzene	50	52		1	104	70-130	06/13/2017 0900
Chloroethane	50	56		1	111	70-130	06/13/2017 0900
Chloroform	50	54		1	109	70-130	06/13/2017 0900
Chloromethane (Methyl chloride)	50	59		1	117	60-140	06/13/2017 0900
Cyclohexane	50	60		1	120	70-130	06/13/2017 0900
1,2-Dibromo-3-chloropropane (DBCP)	50	50		1	99	70-130	06/13/2017 0900
Dibromochloromethane	50	51		1	103	70-130	06/13/2017 0900
1,2-Dibromoethane (EDB)	50	49		1	97	70-130	06/13/2017 0900
1,4-Dichlorobenzene	50	51		1	101	70-130	06/13/2017 0900
1,3-Dichlorobenzene	50	51		1	102	70-130	06/13/2017 0900
1,2-Dichlorobenzene	50	52		1	104	70-130	06/13/2017 0900
Dichlorodifluoromethane	50	57		1	114	60-140	06/13/2017 0900
1,2-Dichloroethane	50	51		1	103	70-130	06/13/2017 0900
1,1-Dichloroethane	50	53		1	107	70-130	06/13/2017 0900
trans-1,2-Dichloroethene	50	52		1	104	70-130	06/13/2017 0900
cis-1,2-Dichloroethene	50	50		1	101	70-130	06/13/2017 0900
1,1-Dichloroethene	50	56		1	112	70-130	06/13/2017 0900
1,2-Dichloropropane	50	55		1	109	70-130	06/13/2017 0900
trans-1,3-Dichloropropene	50	50		1	100	70-130	06/13/2017 0900
cis-1,3-Dichloropropene	50	54		1	108	70-130	06/13/2017 0900
Ethylbenzene	50	53		1	106	70-130	06/13/2017 0900
2-Hexanone	100	95		1	95	70-130	06/13/2017 0900
Isopropylbenzene	50	54		1	109	70-130	06/13/2017 0900
Methyl acetate	50	58		1	116	70-130	06/13/2017 0900
Methyl tertiary butyl ether (MTBE)	50	45		1	89	70-130	06/13/2017 0900
4-Methyl-2-pentanone	100	100		1	100	70-130	06/13/2017 0900
Methylcyclohexane	50	59		1	117	70-130	06/13/2017 0900
Methylene chloride	50	52		1	104	70-130	06/13/2017 0900
Styrene	50	53		1	106	70-130	06/13/2017 0900
1,1,2,2-Tetrachloroethane	50	53		1	105	70-130	06/13/2017 0900
Tetrachloroethene	50	53		1	106	70-130	06/13/2017 0900
Toluene	50	53		1	106	70-130	06/13/2017 0900
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	61		1	122	70-130	06/13/2017 0900
1,2,4-Trichlorobenzene	50	53		1	106	70-130	06/13/2017 0900
1,1,2-Trichloroethane	50	48		1	95	70-130	06/13/2017 0900
1,1,1-Trichloroethane	50	55		1	110	70-130	06/13/2017 0900
Trichloroethene	50	51		1	102	70-130	06/13/2017 0900

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ44098-002

Matrix: Aqueous

Batch: 44098

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichlorofluoromethane	50	51		1	103	70-130	06/13/2017 0900
Vinyl chloride	50	53		1	105	70-130	06/13/2017 0900
Xylenes (total)	100	100		1	105	70-130	06/13/2017 0900
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		96			70-130		
1,2-Dichloroethane-d4		85			70-130		
Toluene-d8		91			70-130		

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ44183-001

Matrix: Aqueous

Batch: 44183

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	06/13/2017 1941
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		94	70-130				
1,2-Dichloroethane-d4		90	70-130				
Toluene-d8		100	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ44183-002

Matrix: Aqueous

Batch: 44183

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	120		1	124	60-140	06/13/2017 1837
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		93	70-130				
1,2-Dichloroethane-d4		87	70-130				
Toluene-d8		101	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: SQ44183-003

Matrix: Aqueous

Batch: 44183

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	120		1	123	0.38	60-140	20	06/13/2017 2021
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		94	70-130						
1,2-Dichloroethane-d4		88	70-130						
Toluene-d8		101	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.



Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.

106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number **70698**

Client A-GLOM	Report to Company Scott Ross	Telephone No. / E-mail 803-254-4400	Quote No.
Address 101 Research Dr.	Sampler's Signature <i>[Signature]</i>	Analysis (Attach list if more space is needed)	Page 1 of 1
City Columbia	Printed Name Elliott Heston / Justin Butler	 SF12045	
State SC	Zip Code 29203		
Project Name Shakespeare RI	Project No. 605342-83	Remains / Cooler I.D.	
Sample ID / Description <small>(Containers for each sample may be combined or not.)</small>	Date		
TMW 117 (21-187)	6/12/17 1530		TMW 117/118
TMW 118 (80-3464)	6/12/17 1620		Rash 24 hours
MW-9	6/12/17 1705		MW-9, 3, 7, 5,
MW-3	6/12/17 1316		9 Standard
MW-7	6/12/17 1430		
MW-8	6/12/17 1520		
MW-4	6/12/17 1645		
Trip Blank	6/12/17		

Turn Around Time Required (Prior lab approval required for expedited TAT.)	Sample Disposal	Possible Hazard Identification			QC Requirements (Specify)			
		<input type="checkbox"/> Return to Client	<input checked="" type="checkbox"/> Disposal by Lab	<input type="checkbox"/> Time-Hazard		<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison
1. Relinquished by Elliott Heston	Date 6/12/17 1739	1. Received by			Date	Time		
2. Relinquished by	Date	2. Received by			Date	Time		
3. Relinquished by	Date	3. Received by			Date	Time		
4. Relinquished by	Date	4. Laboratory received by Evan Walker			Date	Time		

LAB USE ONLY
 Received on ice (Circle) **Yes** No Ice Pack **Headcap Temp. 4.9 °C**

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-08

Page 1 of 1
Effective Date: 03/07/2017
Expiry Date: 03/07/2022

Sample Receipt Checklist (SRC)

Client: Accom Cooler Inspected by/date: ELC 16-12-17 Lot #: SF12045

Means of receipt: <input checked="" type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other _____		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken? <u>NA</u>
pH strip ID: _____ Cl strip ID: _____		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: _____/_____/____ °C <u>14.9/14.9</u> °C _____/_____/____ °C _____/_____/____ °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form? <u>NA</u>
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials? <u>NA</u>
Yes <input type="checkbox"/>	No <input type="checkbox"/>	17. Were all DRO/metals/nutrient samples received at a pH of < 2? <u>NA</u>
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9? <u>NA</u>
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA (< 0.5mg/L) samples free of residual chlorine? <u>NA</u>
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples? <u>NA</u>
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS? <u>NA</u>
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	22. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) <u>IM117(a)</u> ; _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.5 mg/L (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: _____		
SC Drinking Water Project Sample(s) pH verified to be < 2 by _____ Date: _____		
Sample(s) _____ were Not received at a pH of < 2 and were adjusted accordingly using SR# _____		
Sample labels applied by: _____ Verified by: _____ Date: _____		

Comments: _____

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare RI**

Project Number: **60318383**

Lot Number: **SF12046**

Date Completed: **06/14/2017**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: SF12046

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: SF12046

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-9	Aqueous	06/12/2017 1205	06/12/2017
002	MW-3	Aqueous	06/12/2017 1340	06/12/2017
003	MW-7	Aqueous	06/12/2017 1430	06/12/2017
004	MW-5	Aqueous	06/12/2017 1520	06/12/2017
005	MW-4	Aqueous	06/12/2017 1645	06/12/2017
006	Trip Blank	Aqueous	06/12/2017	06/12/2017

(6 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: SF12046

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-9	Aqueous	cis-1,2-Dichloroethene	8260B	7.0		ug/L	5
001	MW-9	Aqueous	Tetrachloroethene	8260B	1.1	J	ug/L	5
001	MW-9	Aqueous	Trichloroethene	8260B	170		ug/L	6
003	MW-7	Aqueous	1,1-Dichloroethane	8260B	1.0	J	ug/L	9
003	MW-7	Aqueous	1,1-Dichloroethene	8260B	1.8	J	ug/L	9
003	MW-7	Aqueous	cis-1,2-Dichloroethene	8260B	44		ug/L	9
003	MW-7	Aqueous	Trichloroethene	8260B	190		ug/L	10
003	MW-7	Aqueous	Vinyl chloride	8260B	0.92	J	ug/L	10
004	MW-5	Aqueous	Acetone	8260B	6.4	J	ug/L	11
004	MW-5	Aqueous	Chloroform	8260B	2.0	J	ug/L	11
004	MW-5	Aqueous	Trichloroethene	8260B	11		ug/L	12
005	MW-4	Aqueous	Benzene	8260B	0.58	J	ug/L	13
005	MW-4	Aqueous	1,1-Dichloroethene	8260B	0.46	J	ug/L	13
005	MW-4	Aqueous	cis-1,2-Dichloroethene	8260B	12		ug/L	13
005	MW-4	Aqueous	Trichloroethene	8260B	3.3	J	ug/L	14
006	Trip Blank	Aqueous	Acetone	8260B	8.5	J	ug/L	15

(16 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF12046-001
Description: MW-9	Matrix: Aqueous
Date Sampled: 06/12/2017 1205	
Date Received: 06/12/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	1	06/14/2017 1105	TML		44224

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	2
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	2
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	2
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	2
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	2
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	2
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	2
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	2
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	2
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	2
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	2
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	2
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	2
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	2
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	2
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	2
cis-1,2-Dichloroethene	156-59-2	8260B	7.0		5.0	0.40	ug/L	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	2
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	2
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	2
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	2
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	2
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	2
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	2
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	2
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	2
Tetrachloroethene	127-18-4	8260B	1.1	J	5.0	0.40	ug/L	2
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	2

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF12046-001
Description: MW-9	Matrix: Aqueous
Date Sampled: 06/12/2017 1205	
Date Received: 06/12/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	1	06/14/2017 1105	TML		44224

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	170		5.0	0.40	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	2
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	2
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		102	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

 Client: **AECOM**

 Laboratory ID: **SF12046-002**

 Description: **MW-3**

 Matrix: **Aqueous**

 Date Sampled: **06/12/2017 1340**

 Date Received: **06/12/2017**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/13/2017 1949	TML		44124

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF12046-002
Description: MW-3	Matrix: Aqueous
Date Sampled: 06/12/2017 1340	
Date Received: 06/12/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/13/2017 1949	TML		44124

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF12046-003
Description: MW-7	Matrix: Aqueous
Date Sampled: 06/12/2017 1430	
Date Received: 06/12/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	1	06/14/2017 1128	TML		44224

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	2
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	2
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	2
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	2
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	2
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	2
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	2
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	2
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	2
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	2
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	2
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	2
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	2
1,1-Dichloroethane	75-34-3	8260B	1.0	J	5.0	0.40	ug/L	2
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	2
1,1-Dichloroethene	75-35-4	8260B	1.8	J	5.0	0.40	ug/L	2
cis-1,2-Dichloroethene	156-59-2	8260B	44		5.0	0.40	ug/L	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	2
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	2
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	2
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	2
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	2
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	2
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	2
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	2
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	2
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	2
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	2

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF12046-003
Description: MW-7	Matrix: Aqueous
Date Sampled: 06/12/2017 1430	
Date Received: 06/12/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	1	06/14/2017 1128	TML		44224

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	190		5.0	0.40	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	2
Vinyl chloride	75-01-4	8260B	0.92	J	2.0	0.40	ug/L	2
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		107	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF12046-004
Description: MW-5	Matrix: Aqueous
Date Sampled: 06/12/2017 1520	
Date Received: 06/12/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/13/2017 2037	TML		44124

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	6.4	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	2.0	J	5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF12046-004
Description: MW-5	Matrix: Aqueous
Date Sampled: 06/12/2017 1520	
Date Received: 06/12/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/13/2017 2037	TML		44124

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	11		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: **AECOM**

Laboratory ID: **SF12046-005**

Description: **MW-4**

Matrix: **Aqueous**

Date Sampled: **06/12/2017 1645**

Date Received: **06/12/2017**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	06/13/2017 2101	TML		44124		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1	
Benzene	71-43-2	8260B	0.58	J	5.0	0.40	ug/L	1	
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1	
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1	
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1	
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1	
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1	
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1	
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1	
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1	
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1	
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1	
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1	
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1	
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1	
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1	
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1	
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1	
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1	
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1	
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1	
1,1-Dichloroethene	75-35-4	8260B	0.46	J	5.0	0.40	ug/L	1	
cis-1,2-Dichloroethene	156-59-2	8260B	12		5.0	0.40	ug/L	1	
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1	
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1	
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1	
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1	
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1	
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1	
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1	
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1	
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1	
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1	
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1	
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1	
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1	
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1	
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1	
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1	
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1	

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF12046-005
Description: MW-4	Matrix: Aqueous
Date Sampled: 06/12/2017 1645	
Date Received: 06/12/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/13/2017 2101	TML		44124

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	3.3	J	5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		104	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF12046-006
Description: Trip Blank	Matrix: Aqueous
Date Sampled: 06/12/2017	
Date Received: 06/12/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/13/2017 1353	TML		44124

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	8.5	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF12046-006
Description: Trip Blank	Matrix: Aqueous
Date Sampled: 06/12/2017	
Date Received: 06/12/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/13/2017 1353	TML		44124

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		107	70-130
Toluene-d8		102	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ44124-001

Matrix: Aqueous

Batch: 44124

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	06/13/2017 1324
Benzene	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Bromodichloromethane	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Bromoform	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	06/13/2017 1324
2-Butanone (MEK)	ND		1	10	2.0	ug/L	06/13/2017 1324
Carbon disulfide	0.56	J	1	5.0	0.40	ug/L	06/13/2017 1324
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Chlorobenzene	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Chloroethane	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Chloroform	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Cyclohexane	ND		1	5.0	0.40	ug/L	06/13/2017 1324
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Dibromochloromethane	ND		1	5.0	0.40	ug/L	06/13/2017 1324
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	06/13/2017 1324
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/13/2017 1324
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/13/2017 1324
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	06/13/2017 1324
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	06/13/2017 1324
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	06/13/2017 1324
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	06/13/2017 1324
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/13/2017 1324
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/13/2017 1324
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	06/13/2017 1324
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/13/2017 1324
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Ethylbenzene	ND		1	5.0	0.40	ug/L	06/13/2017 1324
2-Hexanone	ND		1	10	2.0	ug/L	06/13/2017 1324
Isopropylbenzene	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Methyl acetate	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	06/13/2017 1324
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	06/13/2017 1324
Methylcyclohexane	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Methylene chloride	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Styrene	ND		1	5.0	0.41	ug/L	06/13/2017 1324
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Tetrachloroethene	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Toluene	ND		1	5.0	0.40	ug/L	06/13/2017 1324
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	06/13/2017 1324
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	06/13/2017 1324
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	06/13/2017 1324
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	06/13/2017 1324

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ44124-001

Matrix: Aqueous

Batch: 44124

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Vinyl chloride	ND		1	2.0	0.40	ug/L	06/13/2017 1324
Xylenes (total)	ND		1	5.0	0.40	ug/L	06/13/2017 1324
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		105	70-130				
1,2-Dichloroethane-d4		100	70-130				
Toluene-d8		101	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ44124-002

Matrix: Aqueous

Batch: 44124

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	110	60-140	06/13/2017 1230
Benzene	50	55		1	110	70-130	06/13/2017 1230
Bromodichloromethane	50	54		1	107	70-130	06/13/2017 1230
Bromoform	50	49		1	98	70-130	06/13/2017 1230
Bromomethane (Methyl bromide)	50	62		1	123	70-130	06/13/2017 1230
2-Butanone (MEK)	100	98		1	98	70-130	06/13/2017 1230
Carbon disulfide	50	52		1	103	70-130	06/13/2017 1230
Carbon tetrachloride	50	53		1	106	70-130	06/13/2017 1230
Chlorobenzene	50	53		1	106	70-130	06/13/2017 1230
Chloroethane	50	64		1	128	70-130	06/13/2017 1230
Chloroform	50	53		1	106	70-130	06/13/2017 1230
Chloromethane (Methyl chloride)	50	66		1	131	60-140	06/13/2017 1230
Cyclohexane	50	54		1	107	70-130	06/13/2017 1230
1,2-Dibromo-3-chloropropane (DBCP)	50	42		1	84	70-130	06/13/2017 1230
Dibromochloromethane	50	51		1	102	70-130	06/13/2017 1230
1,2-Dibromoethane (EDB)	50	51		1	101	70-130	06/13/2017 1230
1,2-Dichlorobenzene	50	51		1	103	70-130	06/13/2017 1230
1,3-Dichlorobenzene	50	53		1	106	70-130	06/13/2017 1230
1,4-Dichlorobenzene	50	53		1	106	70-130	06/13/2017 1230
Dichlorodifluoromethane	50	67		1	134	60-140	06/13/2017 1230
1,1-Dichloroethane	50	56		1	111	70-130	06/13/2017 1230
1,2-Dichloroethane	50	52		1	105	70-130	06/13/2017 1230
1,1-Dichloroethene	50	52		1	105	70-130	06/13/2017 1230
trans-1,2-Dichloroethene	50	52		1	105	70-130	06/13/2017 1230
cis-1,2-Dichloroethene	50	52		1	103	70-130	06/13/2017 1230
1,2-Dichloropropane	50	57		1	114	70-130	06/13/2017 1230
cis-1,3-Dichloropropene	50	56		1	112	70-130	06/13/2017 1230
trans-1,3-Dichloropropene	50	51		1	102	70-130	06/13/2017 1230
Ethylbenzene	50	54		1	108	70-130	06/13/2017 1230
2-Hexanone	100	98		1	98	70-130	06/13/2017 1230
Isopropylbenzene	50	52		1	105	70-130	06/13/2017 1230
Methyl acetate	50	52		1	104	70-130	06/13/2017 1230
Methyl tertiary butyl ether (MTBE)	50	42		1	85	70-130	06/13/2017 1230
4-Methyl-2-pentanone	100	110		1	106	70-130	06/13/2017 1230
Methylcyclohexane	50	55		1	110	70-130	06/13/2017 1230
Methylene chloride	50	49		1	99	70-130	06/13/2017 1230
Styrene	50	53		1	105	70-130	06/13/2017 1230
1,1,2,2-Tetrachloroethane	50	50		1	99	70-130	06/13/2017 1230
Tetrachloroethene	50	56		1	112	70-130	06/13/2017 1230
Toluene	50	54		1	108	70-130	06/13/2017 1230
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	52		1	105	70-130	06/13/2017 1230
1,2,4-Trichlorobenzene	50	48		1	96	70-130	06/13/2017 1230
1,1,2-Trichloroethane	50	51		1	101	70-130	06/13/2017 1230
1,1,1-Trichloroethane	50	54		1	108	70-130	06/13/2017 1230

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ44124-002

Matrix: Aqueous

Batch: 44124

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	54		1	109	70-130	06/13/2017 1230
Trichlorofluoromethane	50	58		1	116	70-130	06/13/2017 1230
Vinyl chloride	50	62		1	124	70-130	06/13/2017 1230
Xylenes (total)	100	100		1	104	70-130	06/13/2017 1230
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		105	70-130				
1,2-Dichloroethane-d4		98	70-130				
Toluene-d8		105	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ44224-001

Matrix: Aqueous

Batch: 44224

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	06/14/2017 0945
Benzene	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Bromodichloromethane	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Bromoform	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	06/14/2017 0945
2-Butanone (MEK)	ND		1	10	2.0	ug/L	06/14/2017 0945
Carbon disulfide	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Chlorobenzene	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Chloroethane	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Chloroform	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Cyclohexane	ND		1	5.0	0.40	ug/L	06/14/2017 0945
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Dibromochloromethane	ND		1	5.0	0.40	ug/L	06/14/2017 0945
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	06/14/2017 0945
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/14/2017 0945
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/14/2017 0945
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	06/14/2017 0945
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	06/14/2017 0945
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	06/14/2017 0945
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/14/2017 0945
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/14/2017 0945
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	06/14/2017 0945
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	06/14/2017 0945
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/14/2017 0945
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Ethylbenzene	ND		1	5.0	0.40	ug/L	06/14/2017 0945
2-Hexanone	ND		1	10	2.0	ug/L	06/14/2017 0945
Isopropylbenzene	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Methyl acetate	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	06/14/2017 0945
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	06/14/2017 0945
Methylcyclohexane	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Methylene chloride	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Styrene	ND		1	5.0	0.41	ug/L	06/14/2017 0945
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Tetrachloroethene	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Toluene	ND		1	5.0	0.40	ug/L	06/14/2017 0945
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	06/14/2017 0945
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	06/14/2017 0945
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	06/14/2017 0945
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	06/14/2017 0945

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ44224-001

Matrix: Aqueous

Batch: 44224

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Vinyl chloride	ND		1	2.0	0.40	ug/L	06/14/2017 0945
Xylenes (total)	ND		1	5.0	0.40	ug/L	06/14/2017 0945
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		105	70-130				
1,2-Dichloroethane-d4		98	70-130				
Toluene-d8		100	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ44224-002

Matrix: Aqueous

Batch: 44224

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	40	53		1	133	60-140	06/14/2017 0850
Benzene	20	21		1	104	70-130	06/14/2017 0850
Bromodichloromethane	20	20		1	102	70-130	06/14/2017 0850
Bromoform	20	20		1	99	70-130	06/14/2017 0850
Bromomethane (Methyl bromide)	20	21		1	105	70-130	06/14/2017 0850
2-Butanone (MEK)	40	42		1	105	70-130	06/14/2017 0850
Carbon disulfide	20	20		1	101	70-130	06/14/2017 0850
Carbon tetrachloride	20	20		1	98	70-130	06/14/2017 0850
Chlorobenzene	20	20		1	99	70-130	06/14/2017 0850
Chloroethane	20	22		1	112	70-130	06/14/2017 0850
Chloroform	20	20		1	100	70-130	06/14/2017 0850
Chloromethane (Methyl chloride)	20	24		1	118	60-140	06/14/2017 0850
Cyclohexane	20	20		1	98	70-130	06/14/2017 0850
1,2-Dibromo-3-chloropropane (DBCP)	20	18		1	91	70-130	06/14/2017 0850
Dibromochloromethane	20	20		1	98	70-130	06/14/2017 0850
1,2-Dibromoethane (EDB)	20	19		1	97	70-130	06/14/2017 0850
1,4-Dichlorobenzene	20	20		1	101	70-130	06/14/2017 0850
1,3-Dichlorobenzene	20	20		1	101	70-130	06/14/2017 0850
1,2-Dichlorobenzene	20	20		1	100	70-130	06/14/2017 0850
Dichlorodifluoromethane	20	22		1	111	60-140	06/14/2017 0850
1,2-Dichloroethane	20	21		1	105	70-130	06/14/2017 0850
1,1-Dichloroethane	20	21		1	104	70-130	06/14/2017 0850
trans-1,2-Dichloroethene	20	20		1	99	70-130	06/14/2017 0850
cis-1,2-Dichloroethene	20	20		1	99	70-130	06/14/2017 0850
1,1-Dichloroethene	20	19		1	97	70-130	06/14/2017 0850
1,2-Dichloropropane	20	22		1	110	70-130	06/14/2017 0850
trans-1,3-Dichloropropene	20	19		1	97	70-130	06/14/2017 0850
cis-1,3-Dichloropropene	20	21		1	106	70-130	06/14/2017 0850
Ethylbenzene	20	20		1	101	70-130	06/14/2017 0850
2-Hexanone	40	40		1	100	70-130	06/14/2017 0850
Isopropylbenzene	20	21		1	103	70-130	06/14/2017 0850
Methyl acetate	20	22		1	111	70-130	06/14/2017 0850
Methyl tertiary butyl ether (MTBE)	20	17		1	83	70-130	06/14/2017 0850
4-Methyl-2-pentanone	40	43		1	107	70-130	06/14/2017 0850
Methylcyclohexane	20	21		1	103	70-130	06/14/2017 0850
Methylene chloride	20	19		1	94	70-130	06/14/2017 0850
Styrene	20	20		1	100	70-130	06/14/2017 0850
1,1,2,2-Tetrachloroethane	20	19		1	95	70-130	06/14/2017 0850
Tetrachloroethene	20	21		1	104	70-130	06/14/2017 0850
Toluene	20	20		1	101	70-130	06/14/2017 0850
1,1,2-Trichloro-1,2,2-Trifluoroethane	20	19		1	96	70-130	06/14/2017 0850
1,2,4-Trichlorobenzene	20	19		1	95	70-130	06/14/2017 0850
1,1,2-Trichloroethane	20	19		1	97	70-130	06/14/2017 0850
1,1,1-Trichloroethane	20	20		1	102	70-130	06/14/2017 0850

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ44224-002

Matrix: Aqueous

Batch: 44224

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	20	21		1	103	70-130	06/14/2017 0850
Trichlorofluoromethane	20	19		1	97	70-130	06/14/2017 0850
Vinyl chloride	20	22		1	109	70-130	06/14/2017 0850
Xylenes (total)	40	40		1	100	70-130	06/14/2017 0850
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		102	70-130				
1,2-Dichloroethane-d4		96	70-130				
Toluene-d8		97	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: SQ44224-003

Matrix: Aqueous

Batch: 44224

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	40	73	N,+	1	182	31	60-140	20	06/14/2017 1017
Benzene	20	21		1	105	0.54	70-130	20	06/14/2017 1017
Bromodichloromethane	20	21		1	104	2.0	70-130	20	06/14/2017 1017
Bromoform	20	20		1	98	0.84	70-130	20	06/14/2017 1017
Bromomethane (Methyl bromide)	20	22		1	110	4.9	70-130	20	06/14/2017 1017
2-Butanone (MEK)	40	49		1	122	15	70-130	20	06/14/2017 1017
Carbon disulfide	20	19		1	95	6.3	70-130	20	06/14/2017 1017
Carbon tetrachloride	20	19		1	95	3.7	70-130	20	06/14/2017 1017
Chlorobenzene	20	20		1	100	1.3	70-130	20	06/14/2017 1017
Chloroethane	20	24		1	118	5.9	70-130	20	06/14/2017 1017
Chloroform	20	21		1	103	2.4	70-130	20	06/14/2017 1017
Chloromethane (Methyl chloride)	20	24		1	122	3.7	60-140	20	06/14/2017 1017
Cyclohexane	20	19		1	94	4.7	70-130	20	06/14/2017 1017
1,2-Dibromo-3-chloropropane (DBCP)	20	18		1	92	0.82	70-130	20	06/14/2017 1017
Dibromochloromethane	20	20		1	100	1.9	70-130	20	06/14/2017 1017
1,2-Dibromoethane (EDB)	20	20		1	100	3.5	70-130	20	06/14/2017 1017
1,4-Dichlorobenzene	20	21		1	104	2.5	70-130	20	06/14/2017 1017
1,3-Dichlorobenzene	20	20		1	102	1.8	70-130	20	06/14/2017 1017
1,2-Dichlorobenzene	20	21		1	105	4.9	70-130	20	06/14/2017 1017
Dichlorodifluoromethane	20	23		1	115	3.3	60-140	20	06/14/2017 1017
1,2-Dichloroethane	20	21		1	107	2.0	70-130	20	06/14/2017 1017
1,1-Dichloroethane	20	21		1	107	2.3	70-130	20	06/14/2017 1017
trans-1,2-Dichloroethene	20	20		1	98	1.4	70-130	20	06/14/2017 1017
cis-1,2-Dichloroethene	20	20		1	99	0.46	70-130	20	06/14/2017 1017
1,1-Dichloroethene	20	19		1	93	4.3	70-130	20	06/14/2017 1017
1,2-Dichloropropane	20	22		1	111	0.95	70-130	20	06/14/2017 1017
trans-1,3-Dichloropropene	20	20		1	98	1.1	70-130	20	06/14/2017 1017
cis-1,3-Dichloropropene	20	22		1	109	3.0	70-130	20	06/14/2017 1017
Ethylbenzene	20	20		1	102	1.0	70-130	20	06/14/2017 1017
2-Hexanone	40	42		1	105	5.3	70-130	20	06/14/2017 1017
Isopropylbenzene	20	20		1	102	1.0	70-130	20	06/14/2017 1017
Methyl acetate	20	23		1	117	4.9	70-130	20	06/14/2017 1017
Methyl tertiary butyl ether (MTBE)	20	17		1	85	2.4	70-130	20	06/14/2017 1017
4-Methyl-2-pentanone	40	44		1	111	3.2	70-130	20	06/14/2017 1017
Methylcyclohexane	20	20		1	98	5.4	70-130	20	06/14/2017 1017
Methylene chloride	20	19		1	96	1.4	70-130	20	06/14/2017 1017
Styrene	20	20		1	102	1.1	70-130	20	06/14/2017 1017
1,1,2,2-Tetrachloroethane	20	20		1	100	4.7	70-130	20	06/14/2017 1017
Tetrachloroethene	20	20		1	102	2.2	70-130	20	06/14/2017 1017
Toluene	20	20		1	102	1.2	70-130	20	06/14/2017 1017
1,1,2-Trichloro-1,2,2-Trifluoroethane	20	18		1	91	4.5	70-130	20	06/14/2017 1017
1,2,4-Trichlorobenzene	20	19		1	95	0.17	70-130	20	06/14/2017 1017
1,1,2-Trichloroethane	20	20		1	98	1.9	70-130	20	06/14/2017 1017
1,1,1-Trichloroethane	20	20		1	100	2.3	70-130	20	06/14/2017 1017

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: SQ44224-003

Matrix: Aqueous

Batch: 44224

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	20	20		1	100	2.7	70-130	20	06/14/2017 1017
Trichlorofluoromethane	20	20		1	100	2.3	70-130	20	06/14/2017 1017
Vinyl chloride	20	23		1	113	4.0	70-130	20	06/14/2017 1017
Xylenes (total)	40	40		1	100	0.19	70-130	20	06/14/2017 1017
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		106	70-130						
1,2-Dichloroethane-d4		100	70-130						
Toluene-d8		101	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Chain of Custody Record

Number 70698

Client KCOM	Report to Client Scott Ross	Telephone No. / E-mail 803-254-4400	Quote No.
Address 101 Research Dr.	Sampler's Signature <i>[Signature]</i>	Analysis (Attach list if more space is needed)	Page 1 of 1
City Columbia	Printed Name Elliott Herington / Justin Butler	 	
State SC	Zip Code 29203		
Project Name Shakespeare RI	Project No. 60534283		
Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	
TMW 117 (24-754)	6/12/17	1530	
TMW 118 (80-3462)	6/12/17	1620	
MW-9	6/12/17	1205	
MW-3	6/12/17	1316	
MW-7	6/12/17	1430	
MW-5	6/12/17	1520	
MW-4	6/12/17	1645	
Trip Blank	6/12/17	---	

Sample ID / Description	Date	Time	Matrix				No. of Containers by Preservative Type				OC Requirements (Specify)		
			Water	Soil	Sludge	Other	None	Formaldehyde	Ascorbic Acid	Other			
TMW 117	6/12/17	1530											
TMW 118	6/12/17	1620											
MW-9	6/12/17	1205											
MW-3	6/12/17	1316											
MW-7	6/12/17	1430											
MW-5	6/12/17	1520											
MW-4	6/12/17	1645											
Trip Blank	6/12/17	---											

Sample ID / Description	Date	Time	Possible Hazard Identification			OC Requirements (Specify)
			Aspirated	Flammable	Poison	
TMW 117	6/12/17	1530				
TMW 118	6/12/17	1620				
MW-9	6/12/17	1205				
MW-3	6/12/17	1316				
MW-7	6/12/17	1430				
MW-5	6/12/17	1520				
MW-4	6/12/17	1645				
Trip Blank	6/12/17	---				

Sample ID / Description	Date	Time	Received by	
			Name	Signature
TMW 117	6/12/17	1530		
TMW 118	6/12/17	1620		
MW-9	6/12/17	1205		
MW-3	6/12/17	1316		
MW-7	6/12/17	1430		
MW-5	6/12/17	1520		
MW-4	6/12/17	1645		
Trip Blank	6/12/17	---		

Sample ID / Description	Date	Time	Received by	
			Name	Signature
TMW 117	6-12-17	1739		
TMW 118	6-12-17	1739		
MW-9	6-12-17	1739		
MW-3	6-12-17	1739		
MW-7	6-12-17	1739		
MW-5	6-12-17	1739		
MW-4	6-12-17	1739		
Trip Blank	6-12-17	1739		

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
 Received on Ice (Circle) **Yes** No Ice Pack Receipt Temp. **4.9** °C

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-08

Page 1 of 1
Effective Date: 03/07/2017
Expiry Date: 03/07/2022

Sample Receipt Checklist (SRC)

Client: Accom Cooler Inspected by/date: ELC 16-12-17 Lot #: SE12045

Means of receipt: <input checked="" type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other _____		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
pH strip ID: _____ CI strip ID: _____		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: _____/_____/____ °C <u>14.9/14.9</u> °C _____/_____/____ °C _____/_____/____ °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA (< 0.5mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	22. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____.		
Sample(s) <u>TM117(2), Trip Blank (2)</u> were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.5 mg/L (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: _____.		
SC Drinking Water Project Sample(s) pH verified to be < 2 by _____ Date: _____		
Sample(s) _____ were Not received at a pH of < 2 and were adjusted accordingly using SR# _____		
Sample labels applied by: _____ Verified by: _____ Date: _____		

Comments: _____

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare - Newberry Phase II RI**

Project Number: **60318383 Task 4**

Lot Number: **SF13096**

Date Completed: **06/16/2017**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: SF13096

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

The Trip Blank sample was not received by the lab.

VOC

The laboratory control sample (LCS) associated with sample SF13096-001 through SF13096-013 recovered above the acceptance criteria for Bromomethane and Acetone. The sample associated with this LCS were non-detect for the affected analytes; therefore, the data has been reported.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: SF13096

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW23	Aqueous	06/13/2017 1500	06/13/2017
002	MW24I	Aqueous	06/13/2017 1105	06/13/2017
003	MW19	Aqueous	06/13/2017 1210	06/13/2017
004	MW24	Aqueous	06/13/2017 1005	06/13/2017
005	MW2	Aqueous	06/13/2017 1105	06/13/2017
006	MW22	Aqueous	06/13/2017 1010	06/13/2017
007	TMW33	Aqueous	06/13/2017 1600	06/13/2017
008	TMW24	Aqueous	06/13/2017 1150	06/13/2017
009	TMW32	Aqueous	06/13/2017 1440	06/13/2017
010	TMW25	Aqueous	06/13/2017 1530	06/13/2017
011	MW25	Aqueous	06/13/2017 1615	06/13/2017
012	Trip Blank	Aqueous	06/13/2017	
013	MW25 DUP	Aqueous	06/13/2017 1615	06/13/2017

(13 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: SF13096

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW23	Aqueous	Acetone	8260B	2.3	J	ug/L	5
002	MW24I	Aqueous	Acetone	8260B	2.3	J	ug/L	7
002	MW24I	Aqueous	Chloroform	8260B	0.41	J	ug/L	7
004	MW24	Aqueous	Trichloroethene	8260B	0.65	J	ug/L	12
006	MW22	Aqueous	Chloroform	8260B	0.54	J	ug/L	15
007	TMW33	Aqueous	Trichloroethene	8260B	120		ug/L	18
008	TMW24	Aqueous	Acetone	8260B	150		ug/L	19
008	TMW24	Aqueous	Chloroform	8260B	2.2	J	ug/L	19
008	TMW24	Aqueous	Styrene	8260B	14	J	ug/L	19
008	TMW24	Aqueous	Trichloroethene	8260B	320		ug/L	20
009	TMW32	Aqueous	Acetone	8260B	16	J	ug/L	21
009	TMW32	Aqueous	cis-1,2-Dichloroethene	8260B	4.2	J	ug/L	21
009	TMW32	Aqueous	Styrene	8260B	15	J	ug/L	21
009	TMW32	Aqueous	Trichloroethene	8260B	220		ug/L	22
010	TMW25	Aqueous	Acetone	8260B	7.8	J	ug/L	23
010	TMW25	Aqueous	2-Butanone (MEK)	8260B	3.7	J	ug/L	23
010	TMW25	Aqueous	Trichloroethene	8260B	38		ug/L	24
011	MW25	Aqueous	Trichloroethene	8260B	2.2	J	ug/L	26
013	MW25 DUP	Aqueous	Trichloroethene	8260B	1.9	J	ug/L	28

(19 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-001
Description: MW23	Matrix: Aqueous
Date Sampled: 06/13/2017 1500	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/15/2017 1315	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	2.3	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-001
Description: MW23	Matrix: Aqueous
Date Sampled: 06/13/2017 1500	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/15/2017 1315	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		103	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-002
Description: MW241	Matrix: Aqueous
Date Sampled: 06/13/2017 1105	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/15/2017 1337	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	2.3	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	0.41	J	5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-002
Description: MW24I	Matrix: Aqueous
Date Sampled: 06/13/2017 1105	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/15/2017 1337	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		100	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

 Client: **AECOM**

 Laboratory ID: **SF13096-003**

 Description: **MW19**

 Matrix: **Aqueous**

 Date Sampled: **06/13/2017 1210**

 Date Received: **06/13/2017**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/15/2017 1358	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-003
Description: MW19	Matrix: Aqueous
Date Sampled: 06/13/2017 1210	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/15/2017 1358	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-004
Description: MW24	Matrix: Aqueous
Date Sampled: 06/13/2017 1005	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/15/2017 1420	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-004
Description: MW24	Matrix: Aqueous
Date Sampled: 06/13/2017 1005	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/15/2017 1420	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	0.65	J	5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	70-130
Bromofluorobenzene		100	70-130
Toluene-d8		98	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-005
Description: MW2	Matrix: Aqueous
Date Sampled: 06/13/2017 1105	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/15/2017 1442	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-005
Description: MW2	Matrix: Aqueous
Date Sampled: 06/13/2017 1105	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/15/2017 1442	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-006
Description: MW22	Matrix: Aqueous
Date Sampled: 06/13/2017 1010	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/15/2017 1504	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	0.54	J	5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-006
Description: MW22	Matrix: Aqueous
Date Sampled: 06/13/2017 1010	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/15/2017 1504	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		100	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-007
Description: TMW33	Matrix: Aqueous
Date Sampled: 06/13/2017 1600	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	06/15/2017 1632	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		100	10	ug/L	1
Benzene	71-43-2	8260B	ND		25	2.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		25	2.0	ug/L	1
Bromoform	75-25-2	8260B	ND		25	2.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		25	2.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		25	2.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		25	2.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		25	2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		25	2.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	2.0	ug/L	1
Cyclohexane	110-82-7	8260B	ND		25	2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		25	2.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	2.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	2.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		25	2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		25	2.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		25	2.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		25	2.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		25	2.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		25	2.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		25	2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	2.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	2.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		25	2.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		25	2.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		25	2.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	2.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	2.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		25	2.0	ug/L	1
Styrene	100-42-5	8260B	ND		25	2.1	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	2.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		25	2.0	ug/L	1
Toluene	108-88-3	8260B	ND		25	2.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	2.1	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	2.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	2.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	2.0	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-007
Description: TMW33	Matrix: Aqueous
Date Sampled: 06/13/2017 1600	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	06/15/2017 1632	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	120		25	2.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		25	2.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		10	2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	2.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	70-130
Bromofluorobenzene		104	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-008
Description: TMW24	Matrix: Aqueous
Date Sampled: 06/13/2017 1150	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	06/15/2017 1654	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	150		100	10	ug/L	1
Benzene	71-43-2	8260B	ND		25	2.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		25	2.0	ug/L	1
Bromoform	75-25-2	8260B	ND		25	2.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		25	2.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		25	2.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		25	2.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		25	2.0	ug/L	1
Chloroform	67-66-3	8260B	2.2	J	25	2.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	2.0	ug/L	1
Cyclohexane	110-82-7	8260B	ND		25	2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		25	2.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	2.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	2.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		25	2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		25	2.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		25	2.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		25	2.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		25	2.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		25	2.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		25	2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	2.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	2.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		25	2.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		25	2.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		25	2.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	2.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	2.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		25	2.0	ug/L	1
Styrene	100-42-5	8260B	14	J	25	2.1	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	2.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		25	2.0	ug/L	1
Toluene	108-88-3	8260B	ND		25	2.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	2.1	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	2.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	2.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	2.0	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-008
Description: TMW24	Matrix: Aqueous
Date Sampled: 06/13/2017 1150	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	06/15/2017 1654	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	320		25	2.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		25	2.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		10	2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	2.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-009
Description: TMW32	Matrix: Aqueous
Date Sampled: 06/13/2017 1440	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	06/15/2017 1716	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	16	J	100	10	ug/L	1
Benzene	71-43-2	8260B	ND		25	2.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		25	2.0	ug/L	1
Bromoform	75-25-2	8260B	ND		25	2.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		25	2.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		25	2.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		25	2.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		25	2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		25	2.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	2.0	ug/L	1
Cyclohexane	110-82-7	8260B	ND		25	2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		25	2.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	2.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	2.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		25	2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		25	2.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		25	2.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		25	2.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	4.2	J	25	2.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		25	2.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		25	2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	2.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	2.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		25	2.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		25	2.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		25	2.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	2.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	2.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		25	2.0	ug/L	1
Styrene	100-42-5	8260B	15	J	25	2.1	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	2.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		25	2.0	ug/L	1
Toluene	108-88-3	8260B	ND		25	2.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	2.1	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	2.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	2.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	2.0	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-009
Description: TMW32	Matrix: Aqueous
Date Sampled: 06/13/2017 1440	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	06/15/2017 1716	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	220		25	2.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		25	2.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		10	2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	2.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-010
Description: TMW25	Matrix: Aqueous
Date Sampled: 06/13/2017 1530	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/15/2017 1526	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	7.8	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	3.7	J	10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-010
Description: TMW25	Matrix: Aqueous
Date Sampled: 06/13/2017 1530	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/15/2017 1526	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	38		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		104	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-011
Description: MW25	Matrix: Aqueous
Date Sampled: 06/13/2017 1615	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/15/2017 1548	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-011
Description: MW25	Matrix: Aqueous
Date Sampled: 06/13/2017 1615	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/15/2017 1548	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	2.2	J	5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-013
Description: MW25 DUP	Matrix: Aqueous
Date Sampled: 06/13/2017 1615	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/15/2017 1610	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF13096-013
Description: MW25 DUP	Matrix: Aqueous
Date Sampled: 06/13/2017 1615	
Date Received: 06/13/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/15/2017 1610	TML		44348

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	1.9	J	5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		104	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ44348-001

Matrix: Aqueous

Batch: 44348

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	06/15/2017 1135
Benzene	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Bromodichloromethane	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Bromoform	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	06/15/2017 1135
2-Butanone (MEK)	ND		1	10	2.0	ug/L	06/15/2017 1135
Carbon disulfide	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Chlorobenzene	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Chloroethane	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Chloroform	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Cyclohexane	ND		1	5.0	0.40	ug/L	06/15/2017 1135
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Dibromochloromethane	ND		1	5.0	0.40	ug/L	06/15/2017 1135
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	06/15/2017 1135
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/15/2017 1135
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/15/2017 1135
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	06/15/2017 1135
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	06/15/2017 1135
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	06/15/2017 1135
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/15/2017 1135
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/15/2017 1135
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	06/15/2017 1135
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	06/15/2017 1135
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/15/2017 1135
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Ethylbenzene	ND		1	5.0	0.40	ug/L	06/15/2017 1135
2-Hexanone	ND		1	10	2.0	ug/L	06/15/2017 1135
Isopropylbenzene	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Methyl acetate	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	06/15/2017 1135
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	06/15/2017 1135
Methylcyclohexane	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Methylene chloride	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Styrene	ND		1	5.0	0.41	ug/L	06/15/2017 1135
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Tetrachloroethene	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Toluene	ND		1	5.0	0.40	ug/L	06/15/2017 1135
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	06/15/2017 1135
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	06/15/2017 1135
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	06/15/2017 1135
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	06/15/2017 1135

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ44348-001

Matrix: Aqueous

Batch: 44348

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Vinyl chloride	ND		1	2.0	0.40	ug/L	06/15/2017 1135
Xylenes (total)	ND		1	5.0	0.40	ug/L	06/15/2017 1135
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		102	70-130				
1,2-Dichloroethane-d4		96	70-130				
Toluene-d8		100	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ44348-002

Matrix: Aqueous

Batch: 44348

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	150	N	1	146	60-140	06/15/2017 1037
Benzene	50	52		1	103	70-130	06/15/2017 1037
Bromodichloromethane	50	51		1	102	70-130	06/15/2017 1037
Bromoform	50	50		1	99	70-130	06/15/2017 1037
Bromomethane (Methyl bromide)	50	66	N	1	133	70-130	06/15/2017 1037
2-Butanone (MEK)	100	100		1	103	70-130	06/15/2017 1037
Carbon disulfide	50	60		1	120	70-130	06/15/2017 1037
Carbon tetrachloride	50	57		1	114	70-130	06/15/2017 1037
Chlorobenzene	50	51		1	101	70-130	06/15/2017 1037
Chloroethane	50	64		1	127	70-130	06/15/2017 1037
Chloroform	50	55		1	111	70-130	06/15/2017 1037
Chloromethane (Methyl chloride)	50	60		1	121	60-140	06/15/2017 1037
Cyclohexane	50	60		1	121	70-130	06/15/2017 1037
1,2-Dibromo-3-chloropropane (DBCP)	50	46		1	92	70-130	06/15/2017 1037
Dibromochloromethane	50	49		1	98	70-130	06/15/2017 1037
1,2-Dibromoethane (EDB)	50	48		1	96	70-130	06/15/2017 1037
1,4-Dichlorobenzene	50	48		1	96	70-130	06/15/2017 1037
1,3-Dichlorobenzene	50	50		1	99	70-130	06/15/2017 1037
1,2-Dichlorobenzene	50	53		1	105	70-130	06/15/2017 1037
Dichlorodifluoromethane	50	57		1	115	60-140	06/15/2017 1037
1,2-Dichloroethane	50	51		1	101	70-130	06/15/2017 1037
1,1-Dichloroethane	50	55		1	110	70-130	06/15/2017 1037
cis-1,2-Dichloroethene	50	52		1	105	70-130	06/15/2017 1037
trans-1,2-Dichloroethene	50	54		1	107	70-130	06/15/2017 1037
1,1-Dichloroethene	50	57		1	114	70-130	06/15/2017 1037
1,2-Dichloropropane	50	54		1	108	70-130	06/15/2017 1037
trans-1,3-Dichloropropene	50	48		1	97	70-130	06/15/2017 1037
cis-1,3-Dichloropropene	50	53		1	107	70-130	06/15/2017 1037
Ethylbenzene	50	52		1	103	70-130	06/15/2017 1037
2-Hexanone	100	91		1	91	70-130	06/15/2017 1037
Isopropylbenzene	50	53		1	106	70-130	06/15/2017 1037
Methyl acetate	50	57		1	114	70-130	06/15/2017 1037
Methyl tertiary butyl ether (MTBE)	50	46		1	91	70-130	06/15/2017 1037
4-Methyl-2-pentanone	100	99		1	99	70-130	06/15/2017 1037
Methylcyclohexane	50	59		1	118	70-130	06/15/2017 1037
Methylene chloride	50	54		1	108	70-130	06/15/2017 1037
Styrene	50	51		1	102	70-130	06/15/2017 1037
1,1,2,2-Tetrachloroethane	50	52		1	105	70-130	06/15/2017 1037
Tetrachloroethene	50	52		1	104	70-130	06/15/2017 1037
Toluene	50	52		1	104	70-130	06/15/2017 1037
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	65		1	130	70-130	06/15/2017 1037
1,2,4-Trichlorobenzene	50	45		1	91	70-130	06/15/2017 1037
1,1,2-Trichloroethane	50	46		1	93	70-130	06/15/2017 1037
1,1,1-Trichloroethane	50	57		1	113	70-130	06/15/2017 1037

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ44348-002

Matrix: Aqueous

Batch: 44348

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	51		1	101	70-130	06/15/2017 1037
Trichlorofluoromethane	50	56		1	111	70-130	06/15/2017 1037
Vinyl chloride	50	57		1	113	70-130	06/15/2017 1037
Xylenes (total)	100	100		1	102	70-130	06/15/2017 1037
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		101	70-130				
1,2-Dichloroethane-d4		99	70-130				
Toluene-d8		103	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: SF13096-009MS

Matrix: Aqueous

Batch: 44348

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	16	500	620		5	121	60-140	06/15/2017 1738
Benzene	ND	250	240		5	95	70-130	06/15/2017 1738
Bromodichloromethane	ND	250	240		5	98	70-130	06/15/2017 1738
Bromoform	ND	250	230		5	91	70-130	06/15/2017 1738
Bromomethane (Methyl bromide)	ND	250	340	N	5	136	70-130	06/15/2017 1738
2-Butanone (MEK)	ND	500	460		5	92	70-130	06/15/2017 1738
Carbon disulfide	ND	250	250		5	98	70-130	06/15/2017 1738
Carbon tetrachloride	ND	250	260		5	104	70-130	06/15/2017 1738
Chlorobenzene	ND	250	230		5	94	70-130	06/15/2017 1738
Chloroethane	ND	250	320		5	129	70-130	06/15/2017 1738
Chloroform	ND	250	260		5	102	70-130	06/15/2017 1738
Chloromethane (Methyl chloride)	ND	250	240		5	97	60-140	06/15/2017 1738
Cyclohexane	ND	250	290		5	116	70-130	06/15/2017 1738
1,2-Dibromo-3-chloropropane (DBCP)	ND	250	210		5	83	70-130	06/15/2017 1738
Dibromochloromethane	ND	250	230		5	90	70-130	06/15/2017 1738
1,2-Dibromoethane (EDB)	ND	250	220		5	87	70-130	06/15/2017 1738
1,2-Dichlorobenzene	ND	250	250		5	99	70-130	06/15/2017 1738
1,3-Dichlorobenzene	ND	250	230		5	93	70-130	06/15/2017 1738
1,4-Dichlorobenzene	ND	250	230		5	90	70-130	06/15/2017 1738
Dichlorodifluoromethane	ND	250	290		5	115	60-140	06/15/2017 1738
1,1-Dichloroethane	ND	250	250		5	101	70-130	06/15/2017 1738
1,2-Dichloroethane	ND	250	240		5	97	70-130	06/15/2017 1738
1,1-Dichloroethene	ND	250	240		5	95	70-130	06/15/2017 1738
cis-1,2-Dichloroethene	4.2	250	240		5	93	70-130	06/15/2017 1738
trans-1,2-Dichloroethene	ND	250	240		5	96	70-130	06/15/2017 1738
1,2-Dichloropropane	ND	250	250		5	102	70-130	06/15/2017 1738
cis-1,3-Dichloropropene	ND	250	240		5	96	70-130	06/15/2017 1738
trans-1,3-Dichloropropene	ND	250	220		5	88	70-130	06/15/2017 1738
Ethylbenzene	ND	250	240		5	96	70-130	06/15/2017 1738
2-Hexanone	ND	500	430		5	86	70-130	06/15/2017 1738
Isopropylbenzene	ND	250	250		5	101	70-130	06/15/2017 1738
Methyl acetate	ND	250	280		5	112	70-130	06/15/2017 1738
Methyl tertiary butyl ether (MTBE)	ND	250	200		5	81	70-130	06/15/2017 1738
4-Methyl-2-pentanone	ND	500	460		5	91	70-130	06/15/2017 1738
Methylcyclohexane	ND	250	270		5	109	70-130	06/15/2017 1738
Methylene chloride	ND	250	220		5	88	70-130	06/15/2017 1738
Styrene	15	250	250		5	96	70-130	06/15/2017 1738
1,1,2,2-Tetrachloroethane	ND	250	230		5	92	70-130	06/15/2017 1738
Tetrachloroethene	ND	250	250		5	100	70-130	06/15/2017 1738
Toluene	ND	250	240		5	96	70-130	06/15/2017 1738
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	250	250		5	100	70-130	06/15/2017 1738
1,2,4-Trichlorobenzene	ND	250	240		5	97	70-130	06/15/2017 1738
1,1,1-Trichloroethane	ND	250	260		5	104	70-130	06/15/2017 1738
1,1,2-Trichloroethane	ND	250	220		5	87	70-130	06/15/2017 1738

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: SF13096-009MS

Matrix: Aqueous

Batch: 44348

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	220	250	460		5	94	70-130	06/15/2017 1738
Trichlorofluoromethane	ND	250	300		5	120	70-130	06/15/2017 1738
Vinyl chloride	ND	250	220		5	87	70-130	06/15/2017 1738
Xylenes (total)	ND	500	470		5	95	70-130	06/15/2017 1738
Surrogate	Q	% Rec	Acceptance Limit					
1,2-Dichloroethane-d4		99	70-130					
Bromofluorobenzene		100	70-130					
Toluene-d8		98	70-130					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: SF13096-009MD

Matrix: Aqueous

Batch: 44348

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	16	500	550		5	107	11	60-140	20	06/15/2017 1800
Benzene	ND	250	240		5	97	1.6	70-130	20	06/15/2017 1800
Bromodichloromethane	ND	250	250		5	98	0.39	70-130	20	06/15/2017 1800
Bromoform	ND	250	230		5	93	1.5	70-130	20	06/15/2017 1800
Bromomethane (Methyl bromide)	ND	250	330	N	5	132	2.9	70-130	20	06/15/2017 1800
2-Butanone (MEK)	ND	500	440		5	89	3.5	70-130	20	06/15/2017 1800
Carbon disulfide	ND	250	250		5	101	2.6	70-130	20	06/15/2017 1800
Carbon tetrachloride	ND	250	270		5	107	2.9	70-130	20	06/15/2017 1800
Chlorobenzene	ND	250	240		5	96	2.5	70-130	20	06/15/2017 1800
Chloroethane	ND	250	310		5	124	4.0	70-130	20	06/15/2017 1800
Chloroform	ND	250	260		5	103	1.1	70-130	20	06/15/2017 1800
Chloromethane (Methyl chloride)	ND	250	230		5	93	4.5	60-140	20	06/15/2017 1800
Cyclohexane	ND	250	290		5	117	0.43	70-130	20	06/15/2017 1800
1,2-Dibromo-3-chloropropane (DBCP)	ND	250	210		5	84	1.2	70-130	20	06/15/2017 1800
Dibromochloromethane	ND	250	230		5	92	2.1	70-130	20	06/15/2017 1800
1,2-Dibromoethane (EDB)	ND	250	220		5	89	2.3	70-130	20	06/15/2017 1800
1,2-Dichlorobenzene	ND	250	250		5	100	1.2	70-130	20	06/15/2017 1800
1,3-Dichlorobenzene	ND	250	240		5	94	1.2	70-130	20	06/15/2017 1800
1,4-Dichlorobenzene	ND	250	230		5	92	1.2	70-130	20	06/15/2017 1800
Dichlorodifluoromethane	ND	250	280		5	112	2.8	60-140	20	06/15/2017 1800
1,1-Dichloroethane	ND	250	260		5	102	0.73	70-130	20	06/15/2017 1800
1,2-Dichloroethane	ND	250	240		5	97	0.49	70-130	20	06/15/2017 1800
1,1-Dichloroethene	ND	250	240		5	95	0.30	70-130	20	06/15/2017 1800
cis-1,2-Dichloroethene	4.2	250	240		5	94	1.0	70-130	20	06/15/2017 1800
trans-1,2-Dichloroethene	ND	250	240		5	98	1.5	70-130	20	06/15/2017 1800
1,2-Dichloropropane	ND	250	260		5	105	2.9	70-130	20	06/15/2017 1800
cis-1,3-Dichloropropene	ND	250	250		5	99	2.7	70-130	20	06/15/2017 1800
trans-1,3-Dichloropropene	ND	250	220		5	89	1.5	70-130	20	06/15/2017 1800
Ethylbenzene	ND	250	250		5	100	4.0	70-130	20	06/15/2017 1800
2-Hexanone	ND	500	450		5	89	3.4	70-130	20	06/15/2017 1800
Isopropylbenzene	ND	250	260		5	104	2.7	70-130	20	06/15/2017 1800
Methyl acetate	ND	250	280		5	110	1.5	70-130	20	06/15/2017 1800
Methyl tertiary butyl ether (MTBE)	ND	250	200		5	81	0.61	70-130	20	06/15/2017 1800
4-Methyl-2-pentanone	ND	500	470		5	93	1.8	70-130	20	06/15/2017 1800
Methylcyclohexane	ND	250	280		5	110	1.4	70-130	20	06/15/2017 1800
Methylene chloride	ND	250	220		5	90	2.1	70-130	20	06/15/2017 1800
Styrene	15	250	260		5	99	3.5	70-130	20	06/15/2017 1800
1,1,2,2-Tetrachloroethane	ND	250	230		5	93	0.95	70-130	20	06/15/2017 1800
Tetrachloroethene	ND	250	260		5	103	3.6	70-130	20	06/15/2017 1800
Toluene	ND	250	250		5	99	3.7	70-130	20	06/15/2017 1800
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	250	280		5	111	10	70-130	20	06/15/2017 1800
1,2,4-Trichlorobenzene	ND	250	240		5	98	0.81	70-130	20	06/15/2017 1800
1,1,1-Trichloroethane	ND	250	270		5	108	3.5	70-130	20	06/15/2017 1800
1,1,2-Trichloroethane	ND	250	220		5	88	1.8	70-130	20	06/15/2017 1800

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: SF13096-009MD

Matrix: Aqueous

Batch: 44348

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
Trichloroethene	220	250	460		5	93	0.43	70-130	20	06/15/2017 1800	
Trichlorofluoromethane	ND	250	290		5	116	3.2	70-130	20	06/15/2017 1800	
Vinyl chloride	ND	250	220		5	90	2.5	70-130	20	06/15/2017 1800	
Xylenes (total)	ND	500	490		5	98	3.1	70-130	20	06/15/2017 1800	
Surrogate	Q	% Rec	Acceptance Limit								
1,2-Dichloroethane-d4		101	70-130								
Bromofluorobenzene		105	70-130								
Toluene-d8		102	70-130								

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**

Number 70699

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Chain of Custody Record



Client AHECOM	Report to Contact S. East C. Ross	Telephone No. / E-mail (803) 201-2422 / srothross@ahecom.com	Quote No. 1 of 2
Address 10 Research Drive	Sampler's Signature <i>[Signature]</i>	Analysis (Attach list if more space is needed)	
City Columbia	Printed Name Justin Butler	 SF13096	
State SC	Zip Code 29203		
Project Name Shakespeare - Nuberry Phase II-A	Project No. 60554283 Fork 4	Remains / Dossier I.D. Trip Blank also included of SSC	
Sample ID / Description MW23	Date 6/10/17	Matrix GC	No. of Containers by Preservation Type
MW24I	10:05	GC	1
MW19B	12:10	GC	1
MW24	10:05	GC	1
MW22	10:10	GC	1
TMU33	16:00	GC	1
TMU24	11:50	GC	1
TMU32	14:40	GC	1
TMU25	15:30	GC	1

Turn Around Time Required (Prior lab approval required for expedited DT.) <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)	Sample Disposal <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Dispose by Lab	Possible Hazard Identification <input checked="" type="checkbox"/> Major-Hazard <input type="checkbox"/> Minor-Hazard <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Polisor <input type="checkbox"/> Unknown
1. Requisitioned by Elliot H. Harty	1. Received by Justin Butler	QC Requirements (Specify):
2. Requisitioned by	2. Received by	Date
3. Requisitioned by	3. Received by	Date
4. Requisitioned by	4. Laboratory received by <i>[Signature]</i>	Date
Note: All samples are retained for four weeks from receipt unless other arrangements are made.		LAB USE ONLY Received on ice (Circle) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No for Park Recept Temp. 4.6 °C



Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number **70691**

Client AFCOM	Report to Contact Scott Gross	Telephone No. / E-mail	Quota No.
Address 101 Reservoir Drive	Sampler's Signature 	Analysis (Attach list if more space is needed)	
City Columbia, SC	Printed Name Scott Gross	<div style="text-align: center;"> <p>SF13096</p> </div>	
State SC	Zip Code 29203		
Project Name Shakespeare - Newberry Chase II - E. Unit	Project No. 60571283 Task 4	Remarks / Cooler I.D.	
Sample ID / Description MW25	Date 6/13/17		
Trip Blank	---		
MW25-D-8	6/13/17 1615 CK		

Sample ID / Description	Date	Time	Matrix				No. of Containers by Preservation Type				OC Requirements (Specify)	
			As Collected	As Preserved	As Analyzed	As Reported	As Preserved	As Analyzed	As Reported	As Preserved		
MW25	6/13/17	1615 G										
Trip Blank	---	---										
MW25-D-8	6/13/17	1615 CK										

Turn-Around Time Required (Prior lab approval required for expedited TAT):
 Standard Rush (Specify) Expedited (Lab) Possible Hazard Identification Skin Irritant Poison Unknown

Sample Disposal:
 Return to Client Destroyed by Lab Recycled by Lab

Retrieved by: **Elliott H...** Date: **6/13/17** Time: **17:41**

2. Relinquished by: _____ Date: _____ Time: _____

3. Relinquished by: _____ Date: _____ Time: _____

4. Relinquished by: _____ Date: _____ Time: _____

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
 Received on fee (Circle): Yes No Pack Receipt Temp: **4.8 °C**

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare Newberry Phase II**

Project Number: **60534823**

Lot Number: **SF16059**

Date Completed: **06/28/2017**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: SF16059

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: SF16059

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-17	Aqueous	06/15/2017 1020	06/16/2017
002	MW-16	Aqueous	06/15/2017 1125	06/16/2017
003	MW-6I	Aqueous	06/15/2017 1235	06/16/2017
004	MW-11	Aqueous	06/15/2017 1325	06/16/2017
005	RDW2	Aqueous	06/15/2017 1450	06/16/2017
006	MW-21	Aqueous	06/15/2017 1515	06/16/2017
007	MW-211	Aqueous	06/15/2017 1555	06/16/2017
008	MW-3I	Aqueous	06/15/2017 1625	06/16/2017
009	MW-15	Aqueous	06/16/2017 1015	06/16/2017
010	MW-14	Aqueous	06/16/2017 1115	06/16/2017
011	MW-13	Aqueous	06/16/2017 1405	06/16/2017
012	MW-12	Aqueous	06/16/2017 1515	06/16/2017
013	TRIP BLANK	Aqueous	06/15/2017	06/16/2017

(13 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: SF16059

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-17	Aqueous	cis-1,2-Dichloroethene	8260B	0.54	J	ug/L	5
001	MW-17	Aqueous	Trichloroethene	8260B	14		ug/L	6
002	MW-16	Aqueous	Trichloroethene	8260B	35		ug/L	8
003	MW-6I	Aqueous	Carbon disulfide	8260B	0.93	BJ	ug/L	9
003	MW-6I	Aqueous	cis-1,2-Dichloroethene	8260B	5.7		ug/L	9
003	MW-6I	Aqueous	Styrene	8260B	1.5	J	ug/L	9
003	MW-6I	Aqueous	Trichloroethene	8260B	10		ug/L	10
004	MW-11	Aqueous	Trichloroethene	8260B	0.56	J	ug/L	12
008	MW-3I	Aqueous	Acetone	8260B	2.1	J	ug/L	19
008	MW-3I	Aqueous	1,1-Dichloroethene	8260B	0.60	J	ug/L	19
008	MW-3I	Aqueous	cis-1,2-Dichloroethene	8260B	11		ug/L	19
008	MW-3I	Aqueous	Tetrachloroethene	8260B	0.80	J	ug/L	19
008	MW-3I	Aqueous	Trichloroethene	8260B	8.0		ug/L	20
009	MW-15	Aqueous	Trichloroethene	8260B	4.2	J	ug/L	22
010	MW-14	Aqueous	Trichloroethene	8260B	50		ug/L	24
011	MW-13	Aqueous	cis-1,2-Dichloroethene	8260B	3.8	J	ug/L	25
011	MW-13	Aqueous	Trichloroethene	8260B	25		ug/L	26
012	MW-12	Aqueous	1,1-Dichloroethane	8260B	0.50	J	ug/L	27
012	MW-12	Aqueous	1,1-Dichloroethene	8260B	1.0	J	ug/L	27
012	MW-12	Aqueous	cis-1,2-Dichloroethene	8260B	37		ug/L	27
012	MW-12	Aqueous	trans-1,2-Dichloroethene	8260B	0.43	J	ug/L	27
012	MW-12	Aqueous	Tetrachloroethene	8260B	0.67	J	ug/L	27
012	MW-12	Aqueous	Trichloroethene	8260B	58		ug/L	28
013	TRIP BLANK	Aqueous	Acetone	8260B	17	J	ug/L	29
013	TRIP BLANK	Aqueous	Carbon disulfide	8260B	0.65	BJ	ug/L	29

(25 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-001
Description: MW-17	Matrix: Aqueous
Date Sampled: 06/15/2017 1020	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1804	TML		44933

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	0.54	J	5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-001
Description: MW-17	Matrix: Aqueous
Date Sampled: 06/15/2017 1020	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1804	TML		44933

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	14		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		111	70-130
Toluene-d8		107	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-002
Description: MW-16	Matrix: Aqueous
Date Sampled: 06/15/2017 1125	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1829	TML		44933

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-002
Description: MW-16	Matrix: Aqueous
Date Sampled: 06/15/2017 1125	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1829	TML		44933

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	35		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		110	70-130
Toluene-d8		103	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

 Client: **AECOM**

 Laboratory ID: **SF16059-003**

 Description: **MW-6I**

 Matrix: **Aqueous**

 Date Sampled: **06/15/2017 1235**

 Date Received: **06/16/2017**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1852	TML		44933

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	0.93	BJ	5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	5.7		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	1.5	J	5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-003
Description: MW-6I	Matrix: Aqueous
Date Sampled: 06/15/2017 1235	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1852	TML		44933

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	10		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		111	70-130
Toluene-d8		106	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-004
Description: MW-11	Matrix: Aqueous
Date Sampled: 06/15/2017 1325	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 0330	ECP		45021

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-004
Description: MW-11	Matrix: Aqueous
Date Sampled: 06/15/2017 1325	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 0330	ECP		45021

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	0.56	J	5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		109	70-130
Toluene-d8		104	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-005
Description: RDW2	Matrix: Aqueous
Date Sampled: 06/15/2017 1450	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 0353	ECP		45021

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-005
Description: RDW2	Matrix: Aqueous
Date Sampled: 06/15/2017 1450	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 0353	ECP		45021

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		110	70-130
Toluene-d8		105	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-006
Description: MW-21	Matrix: Aqueous
Date Sampled: 06/15/2017 1515	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 0417	ECP		45021

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-006
Description: MW-21	Matrix: Aqueous
Date Sampled: 06/15/2017 1515	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 0417	ECP		45021

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		103	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-007
Description: MW-211	Matrix: Aqueous
Date Sampled: 06/15/2017 1555	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 0440	ECP		45021

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-007
Description: MW-211	Matrix: Aqueous
Date Sampled: 06/15/2017 1555	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 0440	ECP		45021

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		110	70-130
Toluene-d8		105	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-008
Description: MW-3I	Matrix: Aqueous
Date Sampled: 06/15/2017 1625	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 0504	ECP		45021

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	2.1	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	0.60	J	5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	11		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	0.80	J	5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-008
Description: MW-3I	Matrix: Aqueous
Date Sampled: 06/15/2017 1625	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 0504	ECP		45021

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	8.0		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		102	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-009
Description: MW-15	Matrix: Aqueous
Date Sampled: 06/16/2017 1015	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 1327	TML		45050

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-009
Description: MW-15	Matrix: Aqueous
Date Sampled: 06/16/2017 1015	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 1327	TML		45050

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	4.2	J	5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		109	70-130
Toluene-d8		104	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-010
Description: MW-14	Matrix: Aqueous
Date Sampled: 06/16/2017 1115	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	1	06/27/2017 1148	TML		45278

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	2
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	2
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	2
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	2
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	2
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	2
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	2
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	2
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	2
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	2
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	2
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	2
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	2
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	2
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	2
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	2
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	2
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	2
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	2
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	2
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	2
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	2
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	2
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	2
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	2
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	2

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-010
Description: MW-14	Matrix: Aqueous
Date Sampled: 06/16/2017 1115	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	1	06/27/2017 1148	TML		45278

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	50		5.0	0.40	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	2
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	2
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		83	70-130
Bromofluorobenzene		107	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-011
Description: MW-13	Matrix: Aqueous
Date Sampled: 06/16/2017 1405	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 1351	TML		45050

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	3.8	J	5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-011
Description: MW-13	Matrix: Aqueous
Date Sampled: 06/16/2017 1405	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 1351	TML		45050

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	25		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	70-130
Bromofluorobenzene		113	70-130
Toluene-d8		108	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-012
Description: MW-12	Matrix: Aqueous
Date Sampled: 06/16/2017 1515	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 1415	TML		45050

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	0.50	J	5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	1.0	J	5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	37		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	0.43	J	5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	0.67	J	5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-012
Description: MW-12	Matrix: Aqueous
Date Sampled: 06/16/2017 1515	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 1415	TML		45050

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	58		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		112	70-130
Toluene-d8		105	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-013
Description: TRIP BLANK	Matrix: Aqueous
Date Sampled: 06/15/2017	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1123	TML		44933

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	17	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	0.65	BJ	5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF16059-013
Description: TRIP BLANK	Matrix: Aqueous
Date Sampled: 06/15/2017	
Date Received: 06/16/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1123	TML		44933

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ44933-001

Matrix: Aqueous

Batch: 44933

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	06/22/2017 1045
Benzene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Bromodichloromethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Bromoform	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	06/22/2017 1045
2-Butanone (MEK)	ND		1	10	2.0	ug/L	06/22/2017 1045
Carbon disulfide	0.61	J	1	5.0	0.40	ug/L	06/22/2017 1045
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Chlorobenzene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Chloroethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Chloroform	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Cyclohexane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Dibromochloromethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Ethylbenzene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
2-Hexanone	ND		1	10	2.0	ug/L	06/22/2017 1045
Isopropylbenzene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Methyl acetate	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	06/22/2017 1045
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	06/22/2017 1045
Methylcyclohexane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Methylene chloride	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Styrene	ND		1	5.0	0.41	ug/L	06/22/2017 1045
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Tetrachloroethene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Toluene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	06/22/2017 1045
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ44933-001

Matrix: Aqueous

Batch: 44933

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Vinyl chloride	ND		1	2.0	0.40	ug/L	06/22/2017 1045
Xylenes (total)	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		112	70-130				
1,2-Dichloroethane-d4		94	70-130				
Toluene-d8		103	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ44933-002

Matrix: Aqueous

Batch: 44933

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	98		1	98	60-140	06/22/2017 0922
Benzene	50	52		1	104	70-130	06/22/2017 0922
Bromodichloromethane	50	52		1	105	70-130	06/22/2017 0922
Bromoform	50	53		1	106	70-130	06/22/2017 0922
Bromomethane (Methyl bromide)	50	59		1	118	70-130	06/22/2017 0922
2-Butanone (MEK)	100	100		1	100	70-130	06/22/2017 0922
Carbon disulfide	50	54		1	109	70-130	06/22/2017 0922
Carbon tetrachloride	50	53		1	107	70-130	06/22/2017 0922
Chlorobenzene	50	52		1	104	70-130	06/22/2017 0922
Chloroethane	50	60		1	121	70-130	06/22/2017 0922
Chloroform	50	51		1	102	70-130	06/22/2017 0922
Chloromethane (Methyl chloride)	50	51		1	101	60-140	06/22/2017 0922
Cyclohexane	50	53		1	105	70-130	06/22/2017 0922
1,2-Dibromo-3-chloropropane (DBCP)	50	50		1	99	70-130	06/22/2017 0922
Dibromochloromethane	50	54		1	107	70-130	06/22/2017 0922
1,2-Dibromoethane (EDB)	50	50		1	101	70-130	06/22/2017 0922
1,4-Dichlorobenzene	50	54		1	107	70-130	06/22/2017 0922
1,3-Dichlorobenzene	50	53		1	106	70-130	06/22/2017 0922
1,2-Dichlorobenzene	50	52		1	104	70-130	06/22/2017 0922
Dichlorodifluoromethane	50	53		1	107	60-140	06/22/2017 0922
1,2-Dichloroethane	50	49		1	98	70-130	06/22/2017 0922
1,1-Dichloroethane	50	50		1	99	70-130	06/22/2017 0922
trans-1,2-Dichloroethene	50	53		1	106	70-130	06/22/2017 0922
cis-1,2-Dichloroethene	50	51		1	103	70-130	06/22/2017 0922
1,1-Dichloroethene	50	51		1	101	70-130	06/22/2017 0922
1,2-Dichloropropane	50	53		1	106	70-130	06/22/2017 0922
trans-1,3-Dichloropropene	50	53		1	106	70-130	06/22/2017 0922
cis-1,3-Dichloropropene	50	56		1	112	70-130	06/22/2017 0922
Ethylbenzene	50	53		1	106	70-130	06/22/2017 0922
2-Hexanone	100	95		1	95	70-130	06/22/2017 0922
Isopropylbenzene	50	54		1	107	70-130	06/22/2017 0922
Methyl acetate	50	48		1	96	70-130	06/22/2017 0922
Methyl tertiary butyl ether (MTBE)	50	43		1	85	70-130	06/22/2017 0922
4-Methyl-2-pentanone	100	96		1	96	70-130	06/22/2017 0922
Methylcyclohexane	50	52		1	104	70-130	06/22/2017 0922
Methylene chloride	50	49		1	98	70-130	06/22/2017 0922
Styrene	50	53		1	107	70-130	06/22/2017 0922
1,1,2,2-Tetrachloroethane	50	53		1	106	70-130	06/22/2017 0922
Tetrachloroethene	50	55		1	109	70-130	06/22/2017 0922
Toluene	50	54		1	108	70-130	06/22/2017 0922
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	53		1	105	70-130	06/22/2017 0922
1,2,4-Trichlorobenzene	50	47		1	94	70-130	06/22/2017 0922
1,1,2-Trichloroethane	50	50		1	100	70-130	06/22/2017 0922
1,1,1-Trichloroethane	50	54		1	108	70-130	06/22/2017 0922

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ44933-002

Matrix: Aqueous

Batch: 44933

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	53		1	106	70-130	06/22/2017 0922
Trichlorofluoromethane	50	51		1	102	70-130	06/22/2017 0922
Vinyl chloride	50	55		1	111	70-130	06/22/2017 0922
Xylenes (total)	100	110		1	105	70-130	06/22/2017 0922
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		102	70-130				
1,2-Dichloroethane-d4		87	70-130				
Toluene-d8		101	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45021-001

Matrix: Aqueous

Batch: 45021

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	06/22/2017 2238
Benzene	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Bromodichloromethane	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Bromoform	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	06/22/2017 2238
2-Butanone (MEK)	ND		1	10	2.0	ug/L	06/22/2017 2238
Carbon disulfide	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Chlorobenzene	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Chloroethane	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Chloroform	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Cyclohexane	ND		1	5.0	0.40	ug/L	06/22/2017 2238
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Dibromochloromethane	ND		1	5.0	0.40	ug/L	06/22/2017 2238
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	06/22/2017 2238
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/22/2017 2238
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/22/2017 2238
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	06/22/2017 2238
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	06/22/2017 2238
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	06/22/2017 2238
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/22/2017 2238
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/22/2017 2238
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	06/22/2017 2238
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	06/22/2017 2238
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/22/2017 2238
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Ethylbenzene	ND		1	5.0	0.40	ug/L	06/22/2017 2238
2-Hexanone	ND		1	10	2.0	ug/L	06/22/2017 2238
Isopropylbenzene	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Methyl acetate	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	06/22/2017 2238
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	06/22/2017 2238
Methylcyclohexane	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Methylene chloride	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Styrene	ND		1	5.0	0.41	ug/L	06/22/2017 2238
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Tetrachloroethene	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Toluene	ND		1	5.0	0.40	ug/L	06/22/2017 2238
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	06/22/2017 2238
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	06/22/2017 2238
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	06/22/2017 2238
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	06/22/2017 2238

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45021-001

Matrix: Aqueous

Batch: 45021

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Vinyl chloride	ND		1	2.0	0.40	ug/L	06/22/2017 2238
Xylenes (total)	ND		1	5.0	0.40	ug/L	06/22/2017 2238
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		107	70-130				
1,2-Dichloroethane-d4		93	70-130				
Toluene-d8		103	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45021-002

Matrix: Aqueous

Batch: 45021

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	106	60-140	06/22/2017 2101
Benzene	50	52		1	104	70-130	06/22/2017 2101
Bromodichloromethane	50	52		1	104	70-130	06/22/2017 2101
Bromoform	50	54		1	108	70-130	06/22/2017 2101
Bromomethane (Methyl bromide)	50	57		1	114	70-130	06/22/2017 2101
2-Butanone (MEK)	100	110		1	110	70-130	06/22/2017 2101
Carbon disulfide	50	51		1	102	70-130	06/22/2017 2101
Carbon tetrachloride	50	52		1	104	70-130	06/22/2017 2101
Chlorobenzene	50	52		1	105	70-130	06/22/2017 2101
Chloroethane	50	57		1	113	70-130	06/22/2017 2101
Chloroform	50	50		1	101	70-130	06/22/2017 2101
Chloromethane (Methyl chloride)	50	49		1	99	60-140	06/22/2017 2101
Cyclohexane	50	52		1	104	70-130	06/22/2017 2101
1,2-Dibromo-3-chloropropane (DBCP)	50	51		1	102	70-130	06/22/2017 2101
Dibromochloromethane	50	53		1	106	70-130	06/22/2017 2101
1,2-Dibromoethane (EDB)	50	51		1	102	70-130	06/22/2017 2101
1,4-Dichlorobenzene	50	54		1	107	70-130	06/22/2017 2101
1,3-Dichlorobenzene	50	53		1	107	70-130	06/22/2017 2101
1,2-Dichlorobenzene	50	53		1	105	70-130	06/22/2017 2101
Dichlorodifluoromethane	50	50		1	101	60-140	06/22/2017 2101
1,2-Dichloroethane	50	50		1	101	70-130	06/22/2017 2101
1,1-Dichloroethane	50	51		1	103	70-130	06/22/2017 2101
trans-1,2-Dichloroethene	50	52		1	104	70-130	06/22/2017 2101
cis-1,2-Dichloroethene	50	51		1	101	70-130	06/22/2017 2101
1,1-Dichloroethene	50	50		1	100	70-130	06/22/2017 2101
1,2-Dichloropropane	50	53		1	107	70-130	06/22/2017 2101
trans-1,3-Dichloropropene	50	53		1	105	70-130	06/22/2017 2101
cis-1,3-Dichloropropene	50	56		1	111	70-130	06/22/2017 2101
Ethylbenzene	50	54		1	107	70-130	06/22/2017 2101
2-Hexanone	100	100		1	100	70-130	06/22/2017 2101
Isopropylbenzene	50	54		1	109	70-130	06/22/2017 2101
Methyl acetate	50	48		1	97	70-130	06/22/2017 2101
Methyl tertiary butyl ether (MTBE)	50	43		1	87	70-130	06/22/2017 2101
4-Methyl-2-pentanone	100	100		1	102	70-130	06/22/2017 2101
Methylcyclohexane	50	51		1	102	70-130	06/22/2017 2101
Methylene chloride	50	48		1	97	70-130	06/22/2017 2101
Styrene	50	54		1	108	70-130	06/22/2017 2101
1,1,2,2-Tetrachloroethane	50	52		1	105	70-130	06/22/2017 2101
Tetrachloroethene	50	54		1	107	70-130	06/22/2017 2101
Toluene	50	53		1	106	70-130	06/22/2017 2101
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	53		1	106	70-130	06/22/2017 2101
1,2,4-Trichlorobenzene	50	48		1	95	70-130	06/22/2017 2101
1,1,2-Trichloroethane	50	50		1	100	70-130	06/22/2017 2101
1,1,1-Trichloroethane	50	52		1	104	70-130	06/22/2017 2101

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45021-002

Matrix: Aqueous

Batch: 45021

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	52		1	105	70-130	06/22/2017 2101
Trichlorofluoromethane	50	49		1	97	70-130	06/22/2017 2101
Vinyl chloride	50	53		1	106	70-130	06/22/2017 2101
Xylenes (total)	100	110		1	105	70-130	06/22/2017 2101
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		105			70-130		
1,2-Dichloroethane-d4		89			70-130		
Toluene-d8		101			70-130		

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45050-001

Matrix: Aqueous

Batch: 45050

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	06/23/2017 1013
Benzene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Bromodichloromethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Bromoform	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	06/23/2017 1013
2-Butanone (MEK)	ND		1	10	2.0	ug/L	06/23/2017 1013
Carbon disulfide	0.42	J	1	5.0	0.40	ug/L	06/23/2017 1013
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Chlorobenzene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Chloroethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Chloroform	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Cyclohexane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Dibromochloromethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Ethylbenzene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
2-Hexanone	ND		1	10	2.0	ug/L	06/23/2017 1013
Isopropylbenzene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Methyl acetate	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	06/23/2017 1013
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	06/23/2017 1013
Methylcyclohexane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Methylene chloride	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Styrene	ND		1	5.0	0.41	ug/L	06/23/2017 1013
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Tetrachloroethene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Toluene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	06/23/2017 1013
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45050-001

Matrix: Aqueous

Batch: 45050

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Vinyl chloride	ND		1	2.0	0.40	ug/L	06/23/2017 1013
Xylenes (total)	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		112	70-130				
1,2-Dichloroethane-d4		94	70-130				
Toluene-d8		106	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45050-002

Matrix: Aqueous

Batch: 45050

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	40	39		1	98	60-140	06/23/2017 0916
Benzene	20	20		1	102	70-130	06/23/2017 0916
Bromodichloromethane	20	20		1	101	70-130	06/23/2017 0916
Bromoform	20	21		1	103	70-130	06/23/2017 0916
Bromomethane (Methyl bromide)	20	21		1	105	70-130	06/23/2017 0916
2-Butanone (MEK)	40	40		1	101	70-130	06/23/2017 0916
Carbon disulfide	20	22		1	109	70-130	06/23/2017 0916
Carbon tetrachloride	20	21		1	103	70-130	06/23/2017 0916
Chlorobenzene	20	21		1	103	70-130	06/23/2017 0916
Chloroethane	20	21		1	106	70-130	06/23/2017 0916
Chloroform	20	20		1	101	70-130	06/23/2017 0916
Chloromethane (Methyl chloride)	20	19		1	95	60-140	06/23/2017 0916
Cyclohexane	20	21		1	103	70-130	06/23/2017 0916
1,2-Dibromo-3-chloropropane (DBCP)	20	21		1	103	70-130	06/23/2017 0916
Dibromochloromethane	20	20		1	102	70-130	06/23/2017 0916
1,2-Dibromoethane (EDB)	20	20		1	100	70-130	06/23/2017 0916
1,2-Dichlorobenzene	20	20		1	102	70-130	06/23/2017 0916
1,4-Dichlorobenzene	20	21		1	104	70-130	06/23/2017 0916
1,3-Dichlorobenzene	20	21		1	104	70-130	06/23/2017 0916
Dichlorodifluoromethane	20	19		1	94	60-140	06/23/2017 0916
1,2-Dichloroethane	20	20		1	100	70-130	06/23/2017 0916
1,1-Dichloroethane	20	20		1	101	70-130	06/23/2017 0916
cis-1,2-Dichloroethene	20	20		1	100	70-130	06/23/2017 0916
1,1-Dichloroethene	20	20		1	99	70-130	06/23/2017 0916
trans-1,2-Dichloroethene	20	21		1	105	70-130	06/23/2017 0916
1,2-Dichloropropane	20	21		1	104	70-130	06/23/2017 0916
trans-1,3-Dichloropropene	20	20		1	102	70-130	06/23/2017 0916
cis-1,3-Dichloropropene	20	21		1	106	70-130	06/23/2017 0916
Ethylbenzene	20	21		1	104	70-130	06/23/2017 0916
2-Hexanone	40	38		1	96	70-130	06/23/2017 0916
Isopropylbenzene	20	21		1	107	70-130	06/23/2017 0916
Methyl acetate	20	19		1	95	70-130	06/23/2017 0916
Methyl tertiary butyl ether (MTBE)	20	17		1	84	70-130	06/23/2017 0916
4-Methyl-2-pentanone	40	38		1	96	70-130	06/23/2017 0916
Methylcyclohexane	20	20		1	100	70-130	06/23/2017 0916
Methylene chloride	20	19		1	97	70-130	06/23/2017 0916
Styrene	20	21		1	105	70-130	06/23/2017 0916
1,1,2,2-Tetrachloroethane	20	20		1	101	70-130	06/23/2017 0916
Tetrachloroethene	20	21		1	104	70-130	06/23/2017 0916
Toluene	20	21		1	105	70-130	06/23/2017 0916
1,1,2-Trichloro-1,2,2-Trifluoroethane	20	21		1	103	70-130	06/23/2017 0916
1,2,4-Trichlorobenzene	20	20		1	99	70-130	06/23/2017 0916
1,1,2-Trichloroethane	20	20		1	98	70-130	06/23/2017 0916
1,1,1-Trichloroethane	20	21		1	104	70-130	06/23/2017 0916

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45050-002

Matrix: Aqueous

Batch: 45050

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	20	21		1	104	70-130	06/23/2017 0916
Trichlorofluoromethane	20	17		1	85	70-130	06/23/2017 0916
Vinyl chloride	20	20		1	99	70-130	06/23/2017 0916
Xylenes (total)	40	41		1	104	70-130	06/23/2017 0916
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		109			70-130		
1,2-Dichloroethane-d4		91			70-130		
Toluene-d8		104			70-130		

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: SF16059-010MS

Matrix: Aqueous

Batch: 45050

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	ND	500	340		5	67	60-140	06/23/2017 1857
Benzene	ND	250	270		5	110	70-130	06/23/2017 1857
Bromodichloromethane	ND	250	270		5	106	70-130	06/23/2017 1857
Bromoform	ND	250	250		5	100	70-130	06/23/2017 1857
Bromomethane (Methyl bromide)	ND	250	260		5	106	70-130	06/23/2017 1857
2-Butanone (MEK)	ND	500	360		5	72	70-130	06/23/2017 1857
Carbon disulfide	ND	250	240		5	97	70-130	06/23/2017 1857
Carbon tetrachloride	ND	250	270		5	110	70-130	06/23/2017 1857
Chlorobenzene	ND	250	270		5	110	70-130	06/23/2017 1857
Chloroethane	ND	250	280		5	111	70-130	06/23/2017 1857
Chloroform	ND	250	260		5	103	70-130	06/23/2017 1857
Chloromethane (Methyl chloride)	ND	250	270		5	108	60-140	06/23/2017 1857
Cyclohexane	ND	250	280		5	111	70-130	06/23/2017 1857
1,2-Dibromo-3-chloropropane (DBCP)	ND	250	240		5	95	70-130	06/23/2017 1857
Dibromochloromethane	ND	250	270		5	107	70-130	06/23/2017 1857
1,2-Dibromoethane (EDB)	ND	250	250		5	101	70-130	06/23/2017 1857
1,2-Dichlorobenzene	ND	250	260		5	105	70-130	06/23/2017 1857
1,3-Dichlorobenzene	ND	250	270		5	107	70-130	06/23/2017 1857
1,4-Dichlorobenzene	ND	250	270		5	107	70-130	06/23/2017 1857
Dichlorodifluoromethane	ND	250	270		5	109	60-140	06/23/2017 1857
1,1-Dichloroethane	ND	250	260		5	105	70-130	06/23/2017 1857
1,2-Dichloroethane	ND	250	250		5	100	70-130	06/23/2017 1857
1,1-Dichloroethene	ND	250	260		5	106	70-130	06/23/2017 1857
cis-1,2-Dichloroethene	ND	250	250		5	101	70-130	06/23/2017 1857
trans-1,2-Dichloroethene	ND	250	270		5	107	70-130	06/23/2017 1857
1,2-Dichloropropane	ND	250	270		5	109	70-130	06/23/2017 1857
cis-1,3-Dichloropropene	ND	250	270		5	108	70-130	06/23/2017 1857
trans-1,3-Dichloropropene	ND	250	260		5	103	70-130	06/23/2017 1857
Ethylbenzene	ND	250	280		5	112	70-130	06/23/2017 1857
2-Hexanone	ND	500	450		5	89	70-130	06/23/2017 1857
Isopropylbenzene	ND	250	290		5	115	70-130	06/23/2017 1857
Methyl acetate	ND	250	210		5	84	70-130	06/23/2017 1857
Methyl tertiary butyl ether (MTBE)	ND	250	200		5	82	70-130	06/23/2017 1857
4-Methyl-2-pentanone	ND	500	450		5	90	70-130	06/23/2017 1857
Methylcyclohexane	ND	250	270		5	109	70-130	06/23/2017 1857
Methylene chloride	ND	250	240		5	98	70-130	06/23/2017 1857
Styrene	ND	250	280		5	110	70-130	06/23/2017 1857
1,1,2,2-Tetrachloroethane	ND	250	250		5	100	70-130	06/23/2017 1857
Tetrachloroethene	ND	250	290		5	116	70-130	06/23/2017 1857
Toluene	ND	250	280		5	113	70-130	06/23/2017 1857
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	250	280		5	110	70-130	06/23/2017 1857
1,2,4-Trichlorobenzene	ND	250	240		5	96	70-130	06/23/2017 1857
1,1,1-Trichloroethane	ND	250	270		5	109	70-130	06/23/2017 1857
1,1,2-Trichloroethane	ND	250	250		5	100	70-130	06/23/2017 1857

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: SF16059-010MS

Matrix: Aqueous

Batch: 45050

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	250	330		5	110	70-130	06/23/2017 1857
Trichlorofluoromethane	ND	250	250		5	101	70-130	06/23/2017 1857
Vinyl chloride	ND	250	290		5	114	70-130	06/23/2017 1857
Xylenes (total)	ND	500	550		5	110	70-130	06/23/2017 1857
Surrogate	Q	% Rec	Acceptance Limit					
1,2-Dichloroethane-d4		87	70-130					
Bromofluorobenzene		110	70-130					
Toluene-d8		106	70-130					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: SF16059-010MD

Matrix: Aqueous

Batch: 45050

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	ND	500	390	5	77	14	60-140	20	06/23/2017	1921
Benzene	ND	250	280	5	112	2.2	70-130	20	06/23/2017	1921
Bromodichloromethane	ND	250	280	5	110	3.9	70-130	20	06/23/2017	1921
Bromoform	ND	250	270	5	108	7.8	70-130	20	06/23/2017	1921
Bromomethane (Methyl bromide)	ND	250	280	5	112	5.7	70-130	20	06/23/2017	1921
2-Butanone (MEK)	ND	500	440	5	87	19	70-130	20	06/23/2017	1921
Carbon disulfide	ND	250	260	5	103	5.5	70-130	20	06/23/2017	1921
Carbon tetrachloride	ND	250	280	5	112	2.3	70-130	20	06/23/2017	1921
Chlorobenzene	ND	250	290	5	115	4.1	70-130	20	06/23/2017	1921
Chloroethane	ND	250	290	5	115	3.1	70-130	20	06/23/2017	1921
Chloroform	ND	250	260	5	104	1.6	70-130	20	06/23/2017	1921
Chloromethane (Methyl chloride)	ND	250	270	5	107	0.72	60-140	20	06/23/2017	1921
Cyclohexane	ND	250	280	5	112	0.73	70-130	20	06/23/2017	1921
1,2-Dibromo-3-chloropropane (DBCP)	ND	250	250	5	98	3.6	70-130	20	06/23/2017	1921
Dibromochloromethane	ND	250	280	5	113	6.3	70-130	20	06/23/2017	1921
1,2-Dibromoethane (EDB)	ND	250	270	5	108	6.7	70-130	20	06/23/2017	1921
1,2-Dichlorobenzene	ND	250	280	5	112	6.4	70-130	20	06/23/2017	1921
1,3-Dichlorobenzene	ND	250	280	5	114	6.3	70-130	20	06/23/2017	1921
1,4-Dichlorobenzene	ND	250	290	5	114	6.6	70-130	20	06/23/2017	1921
Dichlorodifluoromethane	ND	250	270	5	110	0.58	60-140	20	06/23/2017	1921
1,1-Dichloroethane	ND	250	270	5	108	3.3	70-130	20	06/23/2017	1921
1,2-Dichloroethane	ND	250	260	5	105	5.1	70-130	20	06/23/2017	1921
1,1-Dichloroethene	ND	250	270	5	109	2.7	70-130	20	06/23/2017	1921
cis-1,2-Dichloroethene	ND	250	260	5	105	3.7	70-130	20	06/23/2017	1921
trans-1,2-Dichloroethene	ND	250	270	5	110	2.1	70-130	20	06/23/2017	1921
1,2-Dichloropropane	ND	250	280	5	113	3.6	70-130	20	06/23/2017	1921
cis-1,3-Dichloropropene	ND	250	280	5	112	4.0	70-130	20	06/23/2017	1921
trans-1,3-Dichloropropene	ND	250	270	5	108	5.0	70-130	20	06/23/2017	1921
Ethylbenzene	ND	250	290	5	118	5.1	70-130	20	06/23/2017	1921
2-Hexanone	ND	500	480	5	97	8.3	70-130	20	06/23/2017	1921
Isopropylbenzene	ND	250	300	5	119	4.1	70-130	20	06/23/2017	1921
Methyl acetate	ND	250	180	5	73	14	70-130	20	06/23/2017	1921
Methyl tertiary butyl ether (MTBE)	ND	250	210	5	84	3.2	70-130	20	06/23/2017	1921
4-Methyl-2-pentanone	ND	500	470	5	94	4.5	70-130	20	06/23/2017	1921
Methylcyclohexane	ND	250	280	5	111	2.3	70-130	20	06/23/2017	1921
Methylene chloride	ND	250	250	5	100	2.0	70-130	20	06/23/2017	1921
Styrene	ND	250	290	5	116	5.1	70-130	20	06/23/2017	1921
1,1,2,2-Tetrachloroethane	ND	250	270	5	108	8.2	70-130	20	06/23/2017	1921
Tetrachloroethene	ND	250	310	5	122	5.5	70-130	20	06/23/2017	1921
Toluene	ND	250	300	5	118	4.7	70-130	20	06/23/2017	1921
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	250	280	5	112	1.4	70-130	20	06/23/2017	1921
1,2,4-Trichlorobenzene	ND	250	250	5	98	2.0	70-130	20	06/23/2017	1921
1,1,1-Trichloroethane	ND	250	270	5	110	0.55	70-130	20	06/23/2017	1921
1,1,2-Trichloroethane	ND	250	270	5	106	6.2	70-130	20	06/23/2017	1921

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: SF16059-010MD

Matrix: Aqueous

Batch: 45050

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	250	340		5	115	3.9	70-130	20	06/23/2017 1921
Trichlorofluoromethane	ND	250	260		5	103	2.6	70-130	20	06/23/2017 1921
Vinyl chloride	ND	250	290		5	116	1.8	70-130	20	06/23/2017 1921
Xylenes (total)	ND	500	580		5	116	5.0	70-130	20	06/23/2017 1921
Surrogate	Q	% Rec	Acceptance Limit							
1,2-Dichloroethane-d4		92	70-130							
Bromofluorobenzene		114	70-130							
Toluene-d8		110	70-130							

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45278-001

Matrix: Aqueous

Batch: 45278

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	06/27/2017 1010
Benzene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Bromodichloromethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Bromoform	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	06/27/2017 1010
2-Butanone (MEK)	ND		1	10	2.0	ug/L	06/27/2017 1010
Carbon disulfide	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Chlorobenzene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Chloroethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Chloroform	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Cyclohexane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Dibromochloromethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Ethylbenzene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
2-Hexanone	ND		1	10	2.0	ug/L	06/27/2017 1010
Isopropylbenzene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Methyl acetate	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	06/27/2017 1010
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	06/27/2017 1010
Methylcyclohexane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Methylene chloride	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Styrene	ND		1	5.0	0.41	ug/L	06/27/2017 1010
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Tetrachloroethene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Toluene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	06/27/2017 1010
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45278-001

Matrix: Aqueous

Batch: 45278

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Vinyl chloride	ND		1	2.0	0.40	ug/L	06/27/2017 1010
Xylenes (total)	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		110	70-130				
1,2-Dichloroethane-d4		85	70-130				
Toluene-d8		104	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45278-002

Matrix: Aqueous

Batch: 45278

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	74		1	74	60-140	06/27/2017 0916
Benzene	50	49		1	98	70-130	06/27/2017 0916
Bromodichloromethane	50	49		1	98	70-130	06/27/2017 0916
Bromoform	50	50		1	101	70-130	06/27/2017 0916
Bromomethane (Methyl bromide)	50	59		1	118	70-130	06/27/2017 0916
2-Butanone (MEK)	100	84		1	84	70-130	06/27/2017 0916
Carbon disulfide	50	48		1	97	70-130	06/27/2017 0916
Carbon tetrachloride	50	46		1	91	70-130	06/27/2017 0916
Chlorobenzene	50	52		1	103	70-130	06/27/2017 0916
Chloroethane	50	57		1	114	70-130	06/27/2017 0916
Chloroform	50	45		1	90	70-130	06/27/2017 0916
Chloromethane (Methyl chloride)	50	47		1	95	60-140	06/27/2017 0916
Cyclohexane	50	45		1	89	70-130	06/27/2017 0916
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	95	70-130	06/27/2017 0916
Dibromochloromethane	50	51		1	102	70-130	06/27/2017 0916
1,2-Dibromoethane (EDB)	50	50		1	100	70-130	06/27/2017 0916
1,4-Dichlorobenzene	50	53		1	106	70-130	06/27/2017 0916
1,3-Dichlorobenzene	50	53		1	107	70-130	06/27/2017 0916
1,2-Dichlorobenzene	50	52		1	103	70-130	06/27/2017 0916
Dichlorodifluoromethane	50	50		1	100	60-140	06/27/2017 0916
1,2-Dichloroethane	50	45		1	90	70-130	06/27/2017 0916
1,1-Dichloroethane	50	45		1	91	70-130	06/27/2017 0916
trans-1,2-Dichloroethene	50	47		1	94	70-130	06/27/2017 0916
cis-1,2-Dichloroethene	50	46		1	92	70-130	06/27/2017 0916
1,1-Dichloroethene	50	44		1	88	70-130	06/27/2017 0916
1,2-Dichloropropane	50	50		1	99	70-130	06/27/2017 0916
trans-1,3-Dichloropropene	50	51		1	102	70-130	06/27/2017 0916
cis-1,3-Dichloropropene	50	51		1	102	70-130	06/27/2017 0916
Ethylbenzene	50	52		1	105	70-130	06/27/2017 0916
2-Hexanone	100	92		1	92	70-130	06/27/2017 0916
Isopropylbenzene	50	51		1	102	70-130	06/27/2017 0916
Methyl acetate	50	41		1	81	70-130	06/27/2017 0916
Methyl tertiary butyl ether (MTBE)	50	37		1	75	70-130	06/27/2017 0916
4-Methyl-2-pentanone	100	86		1	86	70-130	06/27/2017 0916
Methylcyclohexane	50	47		1	94	70-130	06/27/2017 0916
Methylene chloride	50	44		1	89	70-130	06/27/2017 0916
Styrene	50	52		1	105	70-130	06/27/2017 0916
1,1,2,2-Tetrachloroethane	50	52		1	105	70-130	06/27/2017 0916
Tetrachloroethene	50	54		1	107	70-130	06/27/2017 0916
Toluene	50	53		1	106	70-130	06/27/2017 0916
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	46		1	92	70-130	06/27/2017 0916
1,2,4-Trichlorobenzene	50	49		1	98	70-130	06/27/2017 0916
1,1,2-Trichloroethane	50	49		1	99	70-130	06/27/2017 0916
1,1,1-Trichloroethane	50	47		1	94	70-130	06/27/2017 0916

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45278-002

Matrix: Aqueous

Batch: 45278

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	49		1	98	70-130	06/27/2017 0916
Trichlorofluoromethane	50	45		1	89	70-130	06/27/2017 0916
Vinyl chloride	50	52		1	105	70-130	06/27/2017 0916
Xylenes (total)	100	100		1	102	70-130	06/27/2017 0916
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		106	70-130				
1,2-Dichloroethane-d4		82	70-130				
Toluene-d8		104	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 73662

SHEALY
Chain of Custody Record

Client ALCOA	Report to Contact S. A. Zoss	Telephone No. / E-mail (803) 254-4400 Scott.ross@alcoa.com	Quote No.
Address 109 Research Drive		Analysis (Attach list if more space is needed)	
City Columbia	State SC	Zip Code 29203	Page 1 of 2
Project Name Shakespeare - Newberry Phase II	Sampler's Signature <i>[Signature]</i>		
Project No. 60534823	Printed Name Justin Butler		
Sample ID / Description MW-17	Date 6/15/17	Time 1020	No. of Containers by Preservative Type
MW-16	6/15/17	1125	Acid 3
MW-6E	6/15/17	1335	Acid 3
MW-11	6/15/17	1335	Acid 3
RDWA	6/15/17	1450	Acid 3
MW-21	6/15/17	1515	Acid 3
MW-21E	6/15/17	1555	Acid 3
MW-3E	6/15/17	1625	Acid 3
MW-15	6/16/17	1015	Acid 3
MW-14	6/16/17	1115	Acid 3

Matrix	Acid	Alkaline	Ammonia	Ammonium	As	Cd	Cu	Fe	Hg	Mn	Ni	Pb	Se	Si	St	Ti	V	Zn
	<input checked="" type="checkbox"/>	<input type="checkbox"/>																

Possible Hazard Identification	<input checked="" type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Poison	<input type="checkbox"/> Unknown
	1. Received by			
	Date	Time	Date	Time
	6/16/17	1040		
2. Received by				
Date	Time	Date	Time	
3. Received by				
Date	Time	Date	Time	
4. Laboratory received by J. Witt				
Date	Time	Date	Time	
6/16/17	1040			

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
 Received on ice (Circle) Yes No Ice Pack Receipt Temp **27.7** °C

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-08

Page 1 of 1
Effective Date: 03/07/2017
Expiry Date: 03/07/2022

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: CCT/6/16/19 Lot #: SF16059

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
pH strip ID: <u>KIA</u> Cl strip ID: _____		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>0727</u> °C / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	16. Were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA (< 0.5mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input checked="" type="checkbox"/>	No <input checked="" type="checkbox"/>	22. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) <u>003, 013</u> were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.5 mg/L (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: _____		
SC Drinking Water Project Sample(s) pH verified to be < 2 by _____ Date: _____		
Sample(s) _____ were Not received at a pH of < 2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>CCT</u> Verified by: _____ Date: <u>6/16/19</u>		

Comments: _____

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare - Newberry Phase II**

Project Number: **60534623**

Lot Number: **SF20036**

Date Completed: **07/05/2017**



Nisreen Saikaly
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: SF20036

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: SF20036

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW1	Aqueous	06/19/2017 1200	06/20/2017
002	MW6	Aqueous	06/19/2017 1150	06/20/2017
003	MW6D	Aqueous	06/19/2017 1350	06/20/2017
004	MW7I	Aqueous	06/19/2017 1600	06/20/2017
005	MW8	Aqueous	06/19/2017 1405	06/20/2017
006	MW10	Aqueous	06/19/2017 1515	06/20/2017
007	MW18D	Aqueous	06/19/2017 1640	06/20/2017
008	MW6-A	Aqueous	06/19/2017 1150	06/20/2017
009	MW20	Aqueous	06/20/2017 0930	06/20/2017
010	MW10I	Aqueous	06/20/2017 1025	06/20/2017
011	MW20I	Aqueous	06/20/2017 1050	06/20/2017
012	MW9I	Aqueous	06/20/2017 1200	06/20/2017
013	MW9I-A	Aqueous	06/20/2017 1200	06/20/2017
014	TRIP BLANK	Aqueous	06/20/2017	

(14 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: SF20036

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW1	Aqueous	Alkalinity	SM 2320B-	3.1	J	mg/L	7
001	MW1	Aqueous	Chloride	300.0	2.2		mg/L	7
001	MW1	Aqueous	Ferric Iron (calculation)	SM	0.077	J	mg/L	7
001	MW1	Aqueous	Sulfate	300.0	0.70	J	mg/L	7
001	MW1	Aqueous	Dissolved Manganese	6010D	0.018		mg/L	10
001	MW1	Aqueous	Iron	6010D	0.11		mg/L	11
001	MW1	Aqueous	Manganese	6010D	0.035		mg/L	11
002	MW6	Aqueous	Alkalinity	SM 2320B-	2.9	J	mg/L	12
002	MW6	Aqueous	Chloride	300.0	15		mg/L	12
002	MW6	Aqueous	Ferrous Iron	SM 3500-Fe B-	58		mg/L	12
002	MW6	Aqueous	Sulfate	300.0	4.9		mg/L	12
002	MW6	Aqueous	Benzene	8260B	0.66	J	ug/L	13
002	MW6	Aqueous	1,1-Dichloroethane	8260B	0.76	J	ug/L	13
002	MW6	Aqueous	1,1-Dichloroethene	8260B	1.5	J	ug/L	13
002	MW6	Aqueous	cis-1,2-Dichloroethene	8260B	530		ug/L	13
002	MW6	Aqueous	trans-1,2-Dichloroethene	8260B	21		ug/L	13
002	MW6	Aqueous	Isopropylbenzene	8260B	3.6	J	ug/L	13
002	MW6	Aqueous	Styrene	8260B	2.0	J	ug/L	13
002	MW6	Aqueous	Trichloroethene	8260B	27		ug/L	14
002	MW6	Aqueous	Vinyl chloride	8260B	8.1		ug/L	14
002	MW6	Aqueous	Xylenes (total)	8260B	0.52	J	ug/L	14
002	MW6	Aqueous	Dissolved Manganese	6010D	0.034		mg/L	15
002	MW6	Aqueous	Iron	6010D	11		mg/L	16
002	MW6	Aqueous	Manganese	6010D	0.032		mg/L	16
003	MW6D	Aqueous	Alkalinity	SM 2320B-	66		mg/L	17
003	MW6D	Aqueous	Chloride	300.0	3.6		mg/L	17
003	MW6D	Aqueous	Sulfate	300.0	1.2		mg/L	17
003	MW6D	Aqueous	1,2-Dichloroethane	8260B	0.73	J	ug/L	18
003	MW6D	Aqueous	cis-1,2-Dichloroethene	8260B	1.8	J	ug/L	18
003	MW6D	Aqueous	Trichloroethene	8260B	160		ug/L	19
003	MW6D	Aqueous	Iron	6010D	0.040	J	mg/L	21
004	MW7I	Aqueous	Alkalinity	SM 2320B-	23		mg/L	22
004	MW7I	Aqueous	Chloride	300.0	2.8		mg/L	22
004	MW7I	Aqueous	Ferric Iron (calculation)	SM	1.1		mg/L	22
004	MW7I	Aqueous	Ferrous Iron	SM 3500-Fe B-	0.15		mg/L	22
004	MW7I	Aqueous	Benzene	8260B	0.49	J	ug/L	23
004	MW7I	Aqueous	Carbon disulfide	8260B	0.68	BJ	ug/L	23
004	MW7I	Aqueous	1,1-Dichloroethane	8260B	2.4	J	ug/L	23
004	MW7I	Aqueous	1,1-Dichloroethene	8260B	5.2		ug/L	23
004	MW7I	Aqueous	cis-1,2-Dichloroethene	8260B	140		ug/L	23
004	MW7I	Aqueous	trans-1,2-Dichloroethene	8260B	1.4	J	ug/L	23
004	MW7I	Aqueous	Isopropylbenzene	8260B	1.1	J	ug/L	23
004	MW7I	Aqueous	Methylene chloride	8260B	0.41	J	ug/L	23
004	MW7I	Aqueous	Tetrachloroethene	8260B	2.1	J	ug/L	23
004	MW7I	Aqueous	Trichloroethene	8260B	280		ug/L	24

Executive Summary (Continued)

Lot Number: SF20036

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
004	MW71	Aqueous	Xylenes (total)	8260B	1.8	J	ug/L	24
004	MW71	Aqueous	Dissolved Manganese	6010D	0.18		mg/L	25
004	MW71	Aqueous	Iron	6010D	1.2		mg/L	26
004	MW71	Aqueous	Manganese	6010D	0.20		mg/L	26
005	MW8	Aqueous	Chloride	300.0	5.1		mg/L	27
005	MW8	Aqueous	Ferric Iron (calculation)	SM	0.19		mg/L	27
005	MW8	Aqueous	Chloroform	8260B	1.6	J	ug/L	28
005	MW8	Aqueous	1,1-Dichloroethene	8260B	2.6	J	ug/L	28
005	MW8	Aqueous	cis-1,2-Dichloroethene	8260B	74		ug/L	28
005	MW8	Aqueous	trans-1,2-Dichloroethene	8260B	6.8		ug/L	28
005	MW8	Aqueous	Isopropylbenzene	8260B	0.59	J	ug/L	28
005	MW8	Aqueous	Tetrachloroethene	8260B	5.0		ug/L	28
005	MW8	Aqueous	Trichloroethene	8260B	650		ug/L	29
005	MW8	Aqueous	Vinyl chloride	8260B	0.68	J	ug/L	29
005	MW8	Aqueous	Dissolved Manganese	6010D	0.060		mg/L	30
005	MW8	Aqueous	Iron	6010D	0.21		mg/L	31
005	MW8	Aqueous	Manganese	6010D	0.059		mg/L	31
006	MW10	Aqueous	Alkalinity	SM 2320B-	12		mg/L	32
006	MW10	Aqueous	Chloride	300.0	56		mg/L	32
006	MW10	Aqueous	Ferric Iron (calculation)	SM	0.11		mg/L	32
006	MW10	Aqueous	Acetone	8260B	2.6	J	ug/L	33
006	MW10	Aqueous	1,2-Dichloroethane	8260B	0.54	J	ug/L	33
006	MW10	Aqueous	cis-1,2-Dichloroethene	8260B	1.5	J	ug/L	33
006	MW10	Aqueous	Trichloroethene	8260B	570		ug/L	34
006	MW10	Aqueous	Dissolved Manganese	6010D	0.012	J	mg/L	35
006	MW10	Aqueous	Iron	6010D	0.14		mg/L	36
006	MW10	Aqueous	Manganese	6010D	0.012	J	mg/L	36
007	MW18D	Aqueous	Acetone	8260B	73		ug/L	37
007	MW18D	Aqueous	2-Butanone (MEK)	8260B	11		ug/L	37
007	MW18D	Aqueous	2-Hexanone	8260B	2.2	J	ug/L	37
007	MW18D	Aqueous	Styrene	8260B	0.53	J	ug/L	37
007	MW18D	Aqueous	Toluene	8260B	0.56	J	ug/L	37
007	MW18D	Aqueous	Trichloroethene	8260B	21		ug/L	38
008	MW6-A	Aqueous	Acetone	8260B	4.5	J	ug/L	39
008	MW6-A	Aqueous	Benzene	8260B	0.63	J	ug/L	39
008	MW6-A	Aqueous	1,1-Dichloroethane	8260B	0.72	J	ug/L	39
008	MW6-A	Aqueous	1,1-Dichloroethene	8260B	1.5	J	ug/L	39
008	MW6-A	Aqueous	cis-1,2-Dichloroethene	8260B	430		ug/L	39
008	MW6-A	Aqueous	trans-1,2-Dichloroethene	8260B	19		ug/L	39
008	MW6-A	Aqueous	Isopropylbenzene	8260B	3.4	J	ug/L	39
008	MW6-A	Aqueous	Styrene	8260B	2.9	J	ug/L	39
008	MW6-A	Aqueous	Trichloroethene	8260B	28		ug/L	40
008	MW6-A	Aqueous	Vinyl chloride	8260B	7.4		ug/L	40
008	MW6-A	Aqueous	Xylenes (total)	8260B	0.47	J	ug/L	40
009	MW20	Aqueous	Alkalinity	SM 2320B-	9.4	J	mg/L	41
009	MW20	Aqueous	Chloride	300.0	5.1		mg/L	41
009	MW20	Aqueous	Ferric Iron (calculation)	SM	0.42		mg/L	41
009	MW20	Aqueous	Ferrous Iron	SM 3500-Fe B-	0.16		mg/L	41

Executive Summary (Continued)

Lot Number: SF20036

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
009	MW20	Aqueous	Sulfate	300.0	0.57	J	mg/L	41
009	MW20	Aqueous	Chloroform	8260B	0.46	J	ug/L	42
009	MW20	Aqueous	Trichloroethene	8260B	3.9	J	ug/L	43
009	MW20	Aqueous	Dissolved Manganese	6010D	0.016		mg/L	44
009	MW20	Aqueous	Iron	6010D	0.57		mg/L	45
009	MW20	Aqueous	Manganese	6010D	0.020		mg/L	45
010	MW10I	Aqueous	Alkalinity	SM 2320B-	22		mg/L	46
010	MW10I	Aqueous	Chloride	300.0	6.0		mg/L	46
010	MW10I	Aqueous	Ferric Iron (calculation)	SM	0.17		mg/L	46
010	MW10I	Aqueous	Ferrous Iron	SM 3500-Fe B-	0.042	J	mg/L	46
010	MW10I	Aqueous	Trichloroethene	8260B	1000		ug/L	48
010	MW10I	Aqueous	Dissolved Manganese	6010D	0.0086	J	mg/L	49
010	MW10I	Aqueous	Iron	6010D	0.21		mg/L	50
010	MW10I	Aqueous	Manganese	6010D	0.011	J	mg/L	50
011	MW20I	Aqueous	Alkalinity	SM 2320B-	22		mg/L	51
011	MW20I	Aqueous	Chloride	300.0	4.8		mg/L	51
011	MW20I	Aqueous	Ferric Iron (calculation)	SM	0.30		mg/L	51
011	MW20I	Aqueous	Ferrous Iron	SM 3500-Fe B-	0.052		mg/L	51
011	MW20I	Aqueous	Sulfate	300.0	0.59	J	mg/L	51
011	MW20I	Aqueous	Acetone	8260B	2.1	J	ug/L	52
011	MW20I	Aqueous	Chloroform	8260B	0.48	J	ug/L	52
011	MW20I	Aqueous	cis-1,2-Dichloroethene	8260B	4.5	J	ug/L	52
011	MW20I	Aqueous	Tetrachloroethene	8260B	2.2	J	ug/L	52
011	MW20I	Aqueous	Trichloroethene	8260B	330		ug/L	53
011	MW20I	Aqueous	Dissolved Manganese	6010D	0.017		mg/L	54
011	MW20I	Aqueous	Iron	6010D	0.35		mg/L	55
011	MW20I	Aqueous	Manganese	6010D	0.025		mg/L	55
012	MW9I	Aqueous	Alkalinity	SM 2320B-	81		mg/L	56
012	MW9I	Aqueous	Chloride	300.0	3.0		mg/L	56
012	MW9I	Aqueous	Ferric Iron (calculation)	SM	8.4		mg/L	56
012	MW9I	Aqueous	Ferrous Iron	SM 3500-Fe B-	0.56		mg/L	56
012	MW9I	Aqueous	Sulfate	300.0	5.0		mg/L	56
012	MW9I	Aqueous	Chloroform	8260B	3.4	J	ug/L	57
012	MW9I	Aqueous	cis-1,2-Dichloroethene	8260B	31		ug/L	57
012	MW9I	Aqueous	Tetrachloroethene	8260B	3.1	J	ug/L	57
012	MW9I	Aqueous	Trichloroethene	8260B	480		ug/L	58
012	MW9I	Aqueous	Dissolved Manganese	6010D	0.026		mg/L	59
012	MW9I	Aqueous	Iron	6010D	8.9		mg/L	60
012	MW9I	Aqueous	Manganese	6010D	0.15		mg/L	60
013	MW9I-A	Aqueous	Chloroform	8260B	2.3	J	ug/L	61
013	MW9I-A	Aqueous	cis-1,2-Dichloroethene	8260B	26		ug/L	61
013	MW9I-A	Aqueous	Tetrachloroethene	8260B	2.8	J	ug/L	61
013	MW9I-A	Aqueous	Trichloroethene	8260B	420		ug/L	62

(136 detections)

Inorganic non-metals

Client: AECOM	Laboratory ID: SF20036-001
Description: MW1	Matrix: Aqueous
Date Sampled: 06/19/2017 1200	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	(Alkalinity)	SM 2320B-2011	1	06/21/2017 1730	KWP		44847
1	(Chloride)	300.0	1	06/29/2017 0543	TAF		45502
1	(Ferric Iron)	SM 3500/6010B	1	06/22/2017 2139	MSG		
1	(Ferrous Iron)	SM 3500-Fe B-2011	1	06/20/2017 1549	HRJ		44762
1	(Sulfate)	300.0	1	06/29/2017 0543	TAF		45504
1	(Sulfide)	SM 4500-S2 F-2011	1	06/22/2017 1440	MSG		44984

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Alkalinity		SM 2320B-20	3.1	J	10	2.0	mg/L	1
Chloride		300.0	2.2		1.0	0.20	mg/L	1
Ferric Iron (calculation)		SM 3500/601	0.077	J	0.10	0.024	mg/L	1
Ferrous Iron		SM 3500-Fe	ND		0.050	0.040	mg/L	1
Sulfate		300.0	0.70	J	1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2	ND		1.0	0.62	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-001
Description: MW1	Matrix: Aqueous
Date Sampled: 06/19/2017 1200	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1431	TML		44933

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-001
Description: MW1	Matrix: Aqueous
Date Sampled: 06/19/2017 1200	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1431	TML		44933

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	70-130
Bromofluorobenzene		107	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES Metals

Client: **AECOM**

Laboratory ID: **SF20036-001**

Description: **MW1**

Matrix: **Aqueous**

Date Sampled: **06/19/2017 1200**

Date Received: **06/20/2017**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1403	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Dissolved Manganese	7439-96-5	6010D	0.018		0.015	0.0019	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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Page: 10 of 112

ICP-AES Metals

Client: AECOM	Laboratory ID: SF20036-001
Description: MW1	Matrix: Aqueous
Date Sampled: 06/19/2017 1200	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1358	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Iron	7439-89-6	6010D	0.11		0.10	0.040	mg/L	1
Manganese	7439-96-5	6010D	0.035		0.015	0.0019	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Inorganic non-metals

Client: **AECOM**

Laboratory ID: **SF20036-002**

Description: **MW6**

Matrix: **Aqueous**

Date Sampled: **06/19/2017 1150**

Date Received: **06/20/2017**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	(Alkalinity)	SM 2320B-2011	1	06/21/2017 1738	KWP		44847
1	(Chloride)	300.0	1	06/29/2017 0609	TAF		45502
1	(Ferric Iron)	SM 3500/6010B	1	06/22/2017 2139	MSG		
1	(Ferrous Iron)	SM 3500-Fe B-2011	5	06/20/2017 1558	HRJ		44762
1	(Sulfate)	300.0	1	06/29/2017 0609	TAF		45504
1	(Sulfide)	SM 4500-S2 F-2011	1	06/22/2017 1445	MSG		44984

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Alkalinity		SM 2320B-20	2.9	J	10	2.0	mg/L	1
Chloride		300.0	15		1.0	0.20	mg/L	1
Ferric Iron (calculation)		SM 3500/601	ND		0.10	0.024	mg/L	1
Ferrous Iron		SM 3500-Fe	58		0.25	0.20	mg/L	1
Sulfate		300.0	4.9		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2	ND		1.0	0.62	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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Page: 12 of 112

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-002
Description: MW6	Matrix: Aqueous
Date Sampled: 06/19/2017 1150	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1455	TML		44933
2	5030B	8260B	10	06/24/2017 0155	ECP		45116

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	0.66	J	5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	0.76	J	5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	1.5	J	5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	530		50	4.0	ug/L	2
trans-1,2-Dichloroethene	156-60-5	8260B	21		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	3.6	J	5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	2.0	J	5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-002
Description: MW6	Matrix: Aqueous
Date Sampled: 06/19/2017 1150	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1455	TML		44933
2	5030B	8260B	10	06/24/2017 0155	ECP		45116

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	27		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	8.1		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	0.52	J	5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130		94	70-130
Bromofluorobenzene		111	70-130		112	70-130
Toluene-d8		104	70-130		107	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES Metals

Client: AECOM	Laboratory ID: SF20036-002
Description: MW6	Matrix: Aqueous
Date Sampled: 06/19/2017 1150	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1429	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Dissolved Manganese	7439-96-5	6010D	0.034		0.015	0.0019	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES Metals

Client: AECOM	Laboratory ID: SF20036-002
Description: MW6	Matrix: Aqueous
Date Sampled: 06/19/2017 1150	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1425	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Iron	7439-89-6	6010D	11		0.10	0.040	mg/L	1
Manganese	7439-96-5	6010D	0.032		0.015	0.0019	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Inorganic non-metals

Client: **AECOM**

Laboratory ID: **SF20036-003**

Description: **MW6D**

Matrix: **Aqueous**

Date Sampled: **06/19/2017 1350**

Date Received: **06/20/2017**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	(Alkalinity)	SM 2320B-2011	1	06/21/2017 1745	KWP		44847
1	(Chloride)	300.0	1	06/29/2017 0635	TAF		45502
1	(Ferric Iron)	SM 3500/6010B	1	06/22/2017 2139	MSG		
1	(Ferrous Iron)	SM 3500-Fe B-2011	1	06/20/2017 1604	HRJ		44762
1	(Sulfate)	300.0	1	06/29/2017 0635	TAF		45504
1	(Sulfide)	SM 4500-S2 F-2011	1	06/22/2017 1450	MSG		44984

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Alkalinity		SM 2320B-20	66		10	2.0	mg/L	1
Chloride		300.0	3.6		1.0	0.20	mg/L	1
Ferric Iron (calculation)		SM 3500/601	ND		0.10	0.024	mg/L	1
Ferrous Iron		SM 3500-Fe	ND		0.050	0.040	mg/L	1
Sulfate		300.0	1.2		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2	ND		1.0	0.62	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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Page: 17 of 112

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-003
Description: MW6D	Matrix: Aqueous
Date Sampled: 06/19/2017 1350	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1519	TML		44933
2	5030B	8260B	5	06/24/2017 0219	ECP		45116

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	0.73	J	5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	1.8	J	5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-003
Description: MW6D	Matrix: Aqueous
Date Sampled: 06/19/2017 1350	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1519	TML		44933
2	5030B	8260B	5	06/24/2017 0219	ECP		45116

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	160		25	2.0	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130		92	70-130
Bromofluorobenzene		111	70-130		114	70-130
Toluene-d8		106	70-130		107	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES Metals

Client: AECOM	Laboratory ID: SF20036-003
Description: MW6D	Matrix: Aqueous
Date Sampled: 06/19/2017 1350	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1448	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Dissolved Manganese	7439-96-5	6010D	ND		0.015	0.0019	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES Metals

Client: AECOM	Laboratory ID: SF20036-003
Description: MW6D	Matrix: Aqueous
Date Sampled: 06/19/2017 1350	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1434	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Iron	7439-89-6	6010D	0.040	J	0.10	0.040	mg/L	1
Manganese	7439-96-5	6010D	ND		0.015	0.0019	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Inorganic non-metals

Client: **AECOM**

Laboratory ID: **SF20036-004**

Description: **MW7I**

Matrix: **Aqueous**

Date Sampled: **06/19/2017 1600**

Date Received: **06/20/2017**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	(Alkalinity)	SM 2320B-2011	1	06/21/2017 1749	KWP		44847
1	(Chloride)	300.0	1	06/29/2017 2116	TAF		45637
1	(Ferric Iron)	SM 3500/6010B	1	06/22/2017 2139	MSG		
1	(Ferrous Iron)	SM 3500-Fe B-2011	1	06/20/2017 1536	HRJ		44762
1	(Sulfate)	300.0	1	06/29/2017 2116	TAF		45638
1	(Sulfide)	SM 4500-S2 F-2011	1	06/22/2017 1455	MSG		44984

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Alkalinity		SM 2320B-20	23		10	2.0	mg/L	1
Chloride		300.0	2.8		1.0	0.20	mg/L	1
Ferric Iron (calculation)		SM 3500/601	1.1		0.10	0.024	mg/L	1
Ferrous Iron		SM 3500-Fe	0.15		0.050	0.040	mg/L	1
Sulfate		300.0	ND		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2	ND		1.0	0.62	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-004
Description: MW7I	Matrix: Aqueous
Date Sampled: 06/19/2017 1600	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1543	TML		44933
2	5030B	8260B	5	06/24/2017 0243	ECP		45116

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	0.49	J	5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	0.68	BJ	5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	2.4	J	5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	5.2		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	140		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	1.4	J	5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	1.1	J	5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	0.41	J	5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	2.1	J	5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-004
Description: MW7I	Matrix: Aqueous
Date Sampled: 06/19/2017 1600	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1543	TML		44933
2	5030B	8260B	5	06/24/2017 0243	ECP		45116

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	280		25	2.0	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	1.8	J	5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130		91	70-130
Bromofluorobenzene		109	70-130		108	70-130
Toluene-d8		104	70-130		104	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES Metals

Client: AECOM	Laboratory ID: SF20036-004
Description: MW7I	Matrix: Aqueous
Date Sampled: 06/19/2017 1600	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1457	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Dissolved Manganese	7439-96-5	6010D	0.18		0.015	0.0019	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES Metals

Client: AECOM	Laboratory ID: SF20036-004
Description: MW7I	Matrix: Aqueous
Date Sampled: 06/19/2017 1600	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1452	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Iron	7439-89-6	6010D	1.2		0.10	0.040	mg/L	1
Manganese	7439-96-5	6010D	0.20		0.015	0.0019	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Inorganic non-metals

Client: AECOM	Laboratory ID: SF20036-005
Description: MW8	Matrix: Aqueous
Date Sampled: 06/19/2017 1405	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	(Alkalinity)	SM 2320B-2011	1	06/21/2017 1754	KWP		44847
1		(Chloride) 300.0	1	06/29/2017 2143	TAF		45637
1	(Ferric Iron)	SM 3500/6010B	1	06/22/2017 2139	MSG		
1	(Ferrous Iron)	SM 3500-Fe B-2011	1	06/20/2017 1612	HRJ		44762
1		(Sulfate) 300.0	1	06/29/2017 2143	TAF		45638
1	(Sulfide)	SM 4500-S2 F-2011	1	06/22/2017 1500	MSG		44984

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Alkalinity		SM 2320B-20	ND		10	2.0	mg/L	1
Chloride		300.0	5.1		1.0	0.20	mg/L	1
Ferric Iron (calculation)		SM 3500/601	0.19		0.10	0.024	mg/L	1
Ferrous Iron		SM 3500-Fe	ND		0.050	0.040	mg/L	1
Sulfate		300.0	ND		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2	ND		1.0	0.62	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-005
Description: MW8	Matrix: Aqueous
Date Sampled: 06/19/2017 1405	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1606	TML		44933
2	5030B	8260B	10	06/24/2017 0306	ECP		45116

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	1.6	J	5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	2.6	J	5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	74		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	6.8		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	0.59	J	5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	5.0		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-005
Description: MW8	Matrix: Aqueous
Date Sampled: 06/19/2017 1405	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1606	TML		44933
2	5030B	8260B	10	06/24/2017 0306	ECP		45116

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	650		50	4.0	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	0.68	J	2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130		93	70-130
Bromofluorobenzene		107	70-130		116	70-130
Toluene-d8		103	70-130		107	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES Metals

Client: AECOM	Laboratory ID: SF20036-005
Description: MW8	Matrix: Aqueous
Date Sampled: 06/19/2017 1405	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1506	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Dissolved Manganese	7439-96-5	6010D	0.060		0.015	0.0019	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES Metals

Client: AECOM	Laboratory ID: SF20036-005
Description: MW8	Matrix: Aqueous
Date Sampled: 06/19/2017 1405	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1502	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Iron	7439-89-6	6010D	0.21		0.10	0.040	mg/L	1
Manganese	7439-96-5	6010D	0.059		0.015	0.0019	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Inorganic non-metals

Client: AECOM	Laboratory ID: SF20036-006
Description: MW10	Matrix: Aqueous
Date Sampled: 06/19/2017 1515	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	06/21/2017 1812	KWP		44847
1		(Chloride) 300.0	1	06/29/2017 2209	TAF		45637
1		(Ferric Iron) SM 3500/6010B	1	06/22/2017 2139	MSG		
1		(Ferrous Iron) SM 3500-Fe B-2011	1	06/20/2017 1508	HRJ		44762
1		(Sulfate) 300.0	1	06/29/2017 2209	TAF		45638
1		(Sulfide) SM 4500-S2 F-2011	1	06/22/2017 1510	MSG		44984

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Alkalinity		SM 2320B-20	12		10	2.0	mg/L	1
Chloride		300.0	56		1.0	0.20	mg/L	1
Ferric Iron (calculation)		SM 3500/601	0.11		0.10	0.024	mg/L	1
Ferrous Iron		SM 3500-Fe	ND		0.050	0.040	mg/L	1
Sulfate		300.0	ND		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2	ND		1.0	0.62	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-006
Description: MW10	Matrix: Aqueous
Date Sampled: 06/19/2017 1515	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1630	TML		44933
2	5030B	8260B	10	06/24/2017 0330	ECP		45116

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	2.6	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	0.54	J	5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	1.5	J	5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-006
Description: MW10	Matrix: Aqueous
Date Sampled: 06/19/2017 1515	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1630	TML		44933
2	5030B	8260B	10	06/24/2017 0330	ECP		45116

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	570		50	4.0	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130		92	70-130
Bromofluorobenzene		113	70-130		109	70-130
Toluene-d8		108	70-130		105	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES Metals

Client: AECOM	Laboratory ID: SF20036-006
Description: MW10	Matrix: Aqueous
Date Sampled: 06/19/2017 1515	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1515	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Dissolved Manganese	7439-96-5	6010D	0.012	J	0.015	0.0019	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES Metals

Client: AECOM	Laboratory ID: SF20036-006
Description: MW10	Matrix: Aqueous
Date Sampled: 06/19/2017 1515	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1511	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Iron	7439-89-6	6010D	0.14		0.10	0.040	mg/L	1
Manganese	7439-96-5	6010D	0.012	J	0.015	0.0019	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-007
Description: MW18D	Matrix: Aqueous
Date Sampled: 06/19/2017 1640	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1654	TML		44933

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	73		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	11		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	2.2	J	10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	0.53	J	5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	0.56	J	5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-007
Description: MW18D	Matrix: Aqueous
Date Sampled: 06/19/2017 1640	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1654	TML		44933

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	21		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		102	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-008
Description: MW6-A	Matrix: Aqueous
Date Sampled: 06/19/2017 1150	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1718	TML		44933
2	5030B	8260B	10	06/24/2017 0353	ECP		45116

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	4.5	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	0.63	J	5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	0.72	J	5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	1.5	J	5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	430		50	4.0	ug/L	2
trans-1,2-Dichloroethene	156-60-5	8260B	19		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	3.4	J	5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	2.9	J	5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-008
Description: MW6-A	Matrix: Aqueous
Date Sampled: 06/19/2017 1150	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1718	TML		44933
2	5030B	8260B	10	06/24/2017 0353	ECP		45116

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	28		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	7.4		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	0.47	J	5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130		91	70-130
Bromofluorobenzene		107	70-130		106	70-130
Toluene-d8		101	70-130		101	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Inorganic non-metals

Client: AECOM	Laboratory ID: SF20036-009
Description: MW20	Matrix: Aqueous
Date Sampled: 06/20/2017 0930	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	06/21/2017 1817	KWP		44847
1		(Chloride) 300.0	1	06/29/2017 2235	TAF		45637
1		(Ferric Iron) SM 3500/6010B	1	06/22/2017 2139	MSG		
1	(Ferrous Iron)	SM 3500-Fe B-2011	1	06/20/2017 1613	HRJ		44762
1		(Sulfate) 300.0	1	06/29/2017 2235	TAF		45638
1		(Sulfide) SM 4500-S2 F-2011	1	06/22/2017 1520	MSG		44984

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Alkalinity		SM 2320B-20	9.4	J	10	2.0	mg/L	1
Chloride		300.0	5.1		1.0	0.20	mg/L	1
Ferric Iron (calculation)		SM 3500/601	0.42		0.10	0.024	mg/L	1
Ferrous Iron		SM 3500-Fe	0.16		0.050	0.040	mg/L	1
Sulfate		300.0	0.57	J	1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2	ND		1.0	0.62	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-009
Description: MW20	Matrix: Aqueous
Date Sampled: 06/20/2017 0930	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1741	TML		44933
2	5030B	8260B	1	06/23/2017 2247	ECP		45116

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	0.46	J	5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-009
Description: MW20	Matrix: Aqueous
Date Sampled: 06/20/2017 0930	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/22/2017 1741	TML		44933
2	5030B	8260B	1	06/23/2017 2247	ECP		45116

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	3.9	J	5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	70-130		91	70-130
Bromofluorobenzene		106	70-130		111	70-130
Toluene-d8		102	70-130		104	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES Metals

Client: AECOM	Laboratory ID: SF20036-009
Description: MW20	Matrix: Aqueous
Date Sampled: 06/20/2017 0930	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1525	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Dissolved Manganese	7439-96-5	6010D	0.016		0.015	0.0019	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES Metals

Client: AECOM	Laboratory ID: SF20036-009
Description: MW20	Matrix: Aqueous
Date Sampled: 06/20/2017 0930	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1520	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Iron	7439-89-6	6010D	0.57		0.10	0.040	mg/L	1
Manganese	7439-96-5	6010D	0.020		0.015	0.0019	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Inorganic non-metals

Client: AECOM	Laboratory ID: SF20036-010
Description: MW101	Matrix: Aqueous
Date Sampled: 06/20/2017 1025	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	06/21/2017 1821	KWP		44847
1		(Chloride) 300.0	1	06/29/2017 2301	TAF		45637
1		(Ferric Iron) SM 3500/6010B	1	06/22/2017 2139	MSG		
1		(Ferrous Iron) SM 3500-Fe B-2011	1	06/20/2017 1614	HRJ		44762
1		(Sulfate) 300.0	1	06/29/2017 2301	TAF		45638
1		(Sulfide) SM 4500-S2 F-2011	1	06/22/2017 1530	MSG		44984

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Alkalinity		SM 2320B-20	22		10	2.0	mg/L	1
Chloride		300.0	6.0		1.0	0.20	mg/L	1
Ferric Iron (calculation)		SM 3500/601	0.17		0.10	0.024	mg/L	1
Ferrous Iron		SM 3500-Fe	0.042	J	0.050	0.040	mg/L	1
Sulfate		300.0	ND		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2	ND		1.0	0.62	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-010
Description: MW101	Matrix: Aqueous
Date Sampled: 06/20/2017 1025	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	06/23/2017 1502	TML		45050
2	5030B	8260B	20	06/28/2017 0114	ECP		45344

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		100	10	ug/L	1
Benzene	71-43-2	8260B	ND		25	2.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		25	2.0	ug/L	1
Bromoform	75-25-2	8260B	ND		25	2.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		25	2.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		25	2.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		25	2.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		25	2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		25	2.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	2.0	ug/L	1
Cyclohexane	110-82-7	8260B	ND		25	2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		25	2.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	2.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	2.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		25	2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		25	2.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		25	2.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		25	2.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		25	2.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		25	2.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		25	2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	2.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	2.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		25	2.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		25	2.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		25	2.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	2.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	2.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		25	2.0	ug/L	1
Styrene	100-42-5	8260B	ND		25	2.1	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	2.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		25	2.0	ug/L	1
Toluene	108-88-3	8260B	ND		25	2.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	2.1	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	2.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	2.0	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-010
Description: MW101	Matrix: Aqueous
Date Sampled: 06/20/2017 1025	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	06/23/2017 1502	TML		45050
2	5030B	8260B	20	06/28/2017 0114	ECP		45344

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	2.0	ug/L	1
Trichloroethene	79-01-6	8260B	1000		100	8.0	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		25	2.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		10	2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	2.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130		84	70-130
Bromofluorobenzene		108	70-130		106	70-130
Toluene-d8		104	70-130		103	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES Metals

Client: AECOM	Laboratory ID: SF20036-010
Description: MW101	Matrix: Aqueous
Date Sampled: 06/20/2017 1025	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1602	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Dissolved Manganese	7439-96-5	6010D	0.0086	J	0.015	0.0019	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES Metals

Client: AECOM	Laboratory ID: SF20036-010
Description: MW101	Matrix: Aqueous
Date Sampled: 06/20/2017 1025	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1529	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Iron	7439-89-6	6010D	0.21		0.10	0.040	mg/L	1
Manganese	7439-96-5	6010D	0.011	J	0.015	0.0019	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Inorganic non-metals

Client: AECOM	Laboratory ID: SF20036-011
Description: MW201	Matrix: Aqueous
Date Sampled: 06/20/2017 1050	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	06/21/2017 1825	KWP		44847
1		(Chloride) 300.0	1	06/29/2017 2327	TAF		45637
1		(Ferric Iron) SM 3500/6010B	1	06/22/2017 2139	MSG		
1	(Ferrous Iron)	SM 3500-Fe B-2011	1	06/20/2017 1615	HRJ		44762
1		(Sulfate) 300.0	1	06/29/2017 2327	TAF		45638
1		(Sulfide) SM 4500-S2 F-2011	1	06/22/2017 1540	MSG		44984

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Alkalinity		SM 2320B-20	22		10	2.0	mg/L	1
Chloride		300.0	4.8		1.0	0.20	mg/L	1
Ferric Iron (calculation)		SM 3500/601	0.30		0.10	0.024	mg/L	1
Ferrous Iron		SM 3500-Fe	0.052		0.050	0.040	mg/L	1
Sulfate		300.0	0.59	J	1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2	ND		1.0	0.62	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-011
Description: MW201	Matrix: Aqueous
Date Sampled: 06/20/2017 1050	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 1526	TML		45050
2	5030B	8260B	5	06/28/2017 0137	ECP		45344

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	2.1	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	0.48	J	5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	4.5	J	5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	2.2	J	5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-011
Description: MW20I	Matrix: Aqueous
Date Sampled: 06/20/2017 1050	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 1526	TML		45050
2	5030B	8260B	5	06/28/2017 0137	ECP		45344

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	330		25	2.0	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130		88	70-130
Bromofluorobenzene		113	70-130		106	70-130
Toluene-d8		106	70-130		104	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES Metals

Client: AECOM	Laboratory ID: SF20036-011
Description: MW201	Matrix: Aqueous
Date Sampled: 06/20/2017 1050	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1611	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Dissolved Manganese	7439-96-5	6010D	0.017		0.015	0.0019	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES Metals

Client: AECOM	Laboratory ID: SF20036-011
Description: MW201	Matrix: Aqueous
Date Sampled: 06/20/2017 1050	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1607	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Iron	7439-89-6	6010D	0.35		0.10	0.040	mg/L	1
Manganese	7439-96-5	6010D	0.025		0.015	0.0019	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Inorganic non-metals

Client: AECOM	Laboratory ID: SF20036-012
Description: MW9I	Matrix: Aqueous
Date Sampled: 06/20/2017 1200	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Alkalinity) SM 2320B-2011	1	06/21/2017 1831	KWP		44847
1		(Chloride) 300.0	1	06/29/2017 2353	TAF		45637
1		(Ferric Iron) SM 3500/6010B	1	06/22/2017 2139	MSG		
1	(Ferrous Iron)	SM 3500-Fe B-2011	1	06/20/2017 1616	HRJ		44762
1		(Sulfate) 300.0	1	06/29/2017 2353	TAF		45638
1		(Sulfide) SM 4500-S2 F-2011	1	06/22/2017 1555	MSG		44984

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Alkalinity		SM 2320B-20	81		10	2.0	mg/L	1
Chloride		300.0	3.0		1.0	0.20	mg/L	1
Ferric Iron (calculation)		SM 3500/601	8.4		0.10	0.024	mg/L	1
Ferrous Iron		SM 3500-Fe	0.56		0.050	0.040	mg/L	1
Sulfate		300.0	5.0		1.0	0.20	mg/L	1
Sulfide	18496-25-8	SM 4500-S2	ND		1.0	0.62	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-012
Description: MW9I	Matrix: Aqueous
Date Sampled: 06/20/2017 1200	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 1549	TML		45050
2	5030B	8260B	10	06/28/2017 0200	ECP		45344

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	3.4	J	5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	31		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	3.1	J	5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-012
Description: MW9I	Matrix: Aqueous
Date Sampled: 06/20/2017 1200	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 1549	TML		45050
2	5030B	8260B	10	06/28/2017 0200	ECP		45344

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	480		50	4.0	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130		86	70-130
Bromofluorobenzene		108	70-130		109	70-130
Toluene-d8		104	70-130		105	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES Metals

Client: **AECOM**

Laboratory ID: **SF20036-012**

Description: **MW9I**

Matrix: **Aqueous**

Date Sampled: **06/20/2017 1200**

Date Received: **06/20/2017**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1620	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Dissolved Manganese	7439-96-5	6010D	0.026		0.015	0.0019	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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Page: 59 of 112

ICP-AES Metals

Client: AECOM	Laboratory ID: SF20036-012
Description: MW9I	Matrix: Aqueous
Date Sampled: 06/20/2017 1200	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6010D	1	06/21/2017 1616	CJZ	06/20/2017 1720	44722

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Iron	7439-89-6	6010D	8.9		0.10	0.040	mg/L	1
Manganese	7439-96-5	6010D	0.15		0.015	0.0019	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-013
Description: MW9I-A	Matrix: Aqueous
Date Sampled: 06/20/2017 1200	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 1613	TML		45050
2	5030B	8260B	10	06/28/2017 0223	ECP		45344

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	2.3	J	5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	26		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	2.8	J	5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF20036-013
Description: MW9I-A	Matrix: Aqueous
Date Sampled: 06/20/2017 1200	
Date Received: 06/20/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/23/2017 1613	TML		45050
2	5030B	8260B	10	06/28/2017 0223	ECP		45344

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	420		50	4.0	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		97	70-130		86	70-130
Bromofluorobenzene		114	70-130		110	70-130
Toluene-d8		108	70-130		106	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Inorganic non-metals - MB

Sample ID: SQ44762-001

Matrix: Aqueous

Batch:44762

Analytical Method: SM 3500-Fe B-2011

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Ferrous Iron	ND		1	0.050	0.040	mg/L	06/20/2017 1508

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - LCS

Sample ID: SQ44762-002

Matrix: Aqueous

Batch:44762

Analytical Method: SM 3500-Fe B-2011

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Ferrous Iron	0.91	0.99		1	109	90-110	06/20/2017 1532

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - LCSD

Sample ID: SQ44762-003

Matrix: Aqueous

Batch:44762

Analytical Method: SM 3500-Fe B-2011

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Ferrous Iron	0.91	0.99		1	109	0.30	90-110	20	06/20/2017 1533

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MS

Sample ID: SF20036-001MS

Matrix: Aqueous

Batch:44762

Analytical Method: SM 3500-Fe B-2011

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Ferrous Iron	ND	0.91	0.98		1	108	70-130	06/20/2017 1550

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MSD

Sample ID: SF20036-001MD

Matrix: Aqueous

Batch:44762

Analytical Method: SM 3500-Fe B-2011

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Ferrous Iron	ND	0.91	1.0		1	111	2.8	70-130	20	06/20/2017 1551

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MS

Sample ID: SF20036-003MS

Matrix: Aqueous

Batch:44762

Analytical Method: SM 3500-Fe B-2011

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Ferrous Iron	ND	0.91	0.98		1	108	70-130	06/20/2017 1609

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MSD

Sample ID: SF20036-003MD

Matrix: Aqueous

Batch:44762

Analytical Method: SM 3500-Fe B-2011

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Ferrous Iron	ND	0.91	0.99		1	109	0.91	70-130	20	06/20/2017 1611

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Page: 70 of 112

Inorganic non-metals - MB

Sample ID: SQ44847-001

Matrix: Aqueous

Batch:44847

Analytical Method: SM 2320B-2011

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Alkalinity	ND		1	10	2.0	mg/L	06/21/2017 1707

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - LCS

Sample ID: SQ44847-002

Matrix: Aqueous

Batch:44847

Analytical Method: SM 2320B-2011

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Alkalinity	100	97		1	97	90-110	06/21/2017 1714

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - Duplicate

Sample ID: SF20036-001DU

Matrix: Aqueous

Batch:44847

Analytical Method: SM 2320B-2011

Parameter	Sample Amount (mg/L)	Result (mg/L)	Q	Dil	% RPD	% RPD Limit	Analysis Date
Alkalinity	3.1	2.3	+	1	29	20	06/21/2017 1734

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MB

Sample ID: SQ44984-001

Matrix: Aqueous

Batch:44984

Analytical Method: SM 4500-S2 F-2011

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Sulfide	ND		1	1.0	0.62	mg/L	06/22/2017 1415

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - LCS

Sample ID: SQ44984-002

Matrix: Aqueous

Batch:44984

Analytical Method: SM 4500-S2 F-2011

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Sulfide	10	9.4		1	94	80-120	06/22/2017 1420

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - LCSD

Sample ID: SQ44984-003

Matrix: Aqueous

Batch:44984

Analytical Method: SM 4500-S2 F-2011

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Sulfide	10	9.5		1	95	1.1	80-120	20	06/22/2017 1425

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MB

Sample ID: SQ45502-001

Matrix: Aqueous

Batch: 45502

Analytical Method: 300.0

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Chloride	ND		1	1.0	0.20	mg/L	06/28/2017 1852

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - LCS

Sample ID: SQ45502-002

Matrix: Aqueous

Batch:45502

Analytical Method: 300.0

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Chloride	20	20		1	100	90-110	06/28/2017 1918

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MS

Sample ID: SF20036-003MS

Matrix: Aqueous

Batch:45502

Analytical Method: 300.0

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Chloride	3.6	20	22		1	91	90-110	06/29/2017 0701

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MSD

Sample ID: SF20036-003MD

Matrix: Aqueous

Batch:45502

Analytical Method: 300.0

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Chloride	3.6	20	23		1	98	6.2	90-110	20	06/29/2017 0727

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MB

Sample ID: SQ45504-001

Matrix: Aqueous

Batch: 45504

Analytical Method: 300.0

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Sulfate	ND		1	1.0	0.20	mg/L	06/28/2017 1852

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - LCS

Sample ID: SQ45504-002

Matrix: Aqueous

Batch:45504

Analytical Method: 300.0

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Sulfate	20	20		1	101	90-110	06/28/2017 1918

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MS

Sample ID: SF20036-003MS

Matrix: Aqueous

Batch:45504

Analytical Method: 300.0

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Sulfate	1.2	20	19		1	90	90-110	06/29/2017 0701

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MSD

Sample ID: SF20036-003MD

Matrix: Aqueous

Batch:45504

Analytical Method: 300.0

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Sulfate	1.2	20	20		1	95	5.1	90-110	20	06/29/2017 0727

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MB

Sample ID: SQ45637-001

Matrix: Aqueous

Batch: 45637

Analytical Method: 300.0

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Chloride	ND		1	1.0	0.20	mg/L	06/29/2017 2024

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - LCS

Sample ID: SQ45637-002

Matrix: Aqueous

Batch:45637

Analytical Method: 300.0

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Chloride	20	20		1	98	90-110	06/29/2017 2050

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MS

Sample ID: SF20036-012MS

Matrix: Aqueous

Batch:45637

Analytical Method: 300.0

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Chloride	3.0	20	22		1	94	90-110	06/30/2017 0019

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MSD

Sample ID: SF20036-012MD

Matrix: Aqueous

Batch:45637

Analytical Method: 300.0

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Chloride	3.0	20	22		1	93	0.88	90-110	20	06/30/2017 0045

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MB

Sample ID: SQ45638-001

Matrix: Aqueous

Batch: 45638

Analytical Method: 300.0

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Sulfate	ND		1	1.0	0.20	mg/L	06/29/2017 2024

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - LCS

Sample ID: SQ45638-002

Matrix: Aqueous

Batch: 45638

Analytical Method: 300.0

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Sulfate	20	19		1	96	90-110	06/29/2017 2050

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MS

Sample ID: SF20036-012MS

Matrix: Aqueous

Batch:45638

Analytical Method: 300.0

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Sulfate	5.0	20	24		1	93	90-110	06/30/2017 0019

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Inorganic non-metals - MSD

Sample ID: SF20036-012MD

Matrix: Aqueous

Batch:45638

Analytical Method: 300.0

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Sulfate	5.0	20	23		1	92	0.83	90-110	20	06/30/2017 0045

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ44933-001

Matrix: Aqueous

Batch: 44933

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	06/22/2017 1045
Benzene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Bromodichloromethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Bromoform	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	06/22/2017 1045
2-Butanone (MEK)	ND		1	10	2.0	ug/L	06/22/2017 1045
Carbon disulfide	0.61	J	1	5.0	0.40	ug/L	06/22/2017 1045
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Chlorobenzene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Chloroethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Chloroform	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Cyclohexane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Dibromochloromethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Ethylbenzene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
2-Hexanone	ND		1	10	2.0	ug/L	06/22/2017 1045
Isopropylbenzene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Methyl acetate	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	06/22/2017 1045
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	06/22/2017 1045
Methylcyclohexane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Methylene chloride	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Styrene	ND		1	5.0	0.41	ug/L	06/22/2017 1045
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Tetrachloroethene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Toluene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	06/22/2017 1045
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ44933-001

Matrix: Aqueous

Batch: 44933

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Vinyl chloride	ND		1	2.0	0.40	ug/L	06/22/2017 1045
Xylenes (total)	ND		1	5.0	0.40	ug/L	06/22/2017 1045
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		112	70-130				
1,2-Dichloroethane-d4		94	70-130				
Toluene-d8		103	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ44933-002

Matrix: Aqueous

Batch: 44933

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	98		1	98	60-140	06/22/2017 0922
Benzene	50	52		1	104	70-130	06/22/2017 0922
Bromodichloromethane	50	52		1	105	70-130	06/22/2017 0922
Bromoform	50	53		1	106	70-130	06/22/2017 0922
Bromomethane (Methyl bromide)	50	59		1	118	70-130	06/22/2017 0922
2-Butanone (MEK)	100	100		1	100	70-130	06/22/2017 0922
Carbon disulfide	50	54		1	109	70-130	06/22/2017 0922
Carbon tetrachloride	50	53		1	107	70-130	06/22/2017 0922
Chlorobenzene	50	52		1	104	70-130	06/22/2017 0922
Chloroethane	50	60		1	121	70-130	06/22/2017 0922
Chloroform	50	51		1	102	70-130	06/22/2017 0922
Chloromethane (Methyl chloride)	50	51		1	101	60-140	06/22/2017 0922
Cyclohexane	50	53		1	105	70-130	06/22/2017 0922
1,2-Dibromo-3-chloropropane (DBCP)	50	50		1	99	70-130	06/22/2017 0922
Dibromochloromethane	50	54		1	107	70-130	06/22/2017 0922
1,2-Dibromoethane (EDB)	50	50		1	101	70-130	06/22/2017 0922
1,4-Dichlorobenzene	50	54		1	107	70-130	06/22/2017 0922
1,3-Dichlorobenzene	50	53		1	106	70-130	06/22/2017 0922
1,2-Dichlorobenzene	50	52		1	104	70-130	06/22/2017 0922
Dichlorodifluoromethane	50	53		1	107	60-140	06/22/2017 0922
1,2-Dichloroethane	50	49		1	98	70-130	06/22/2017 0922
1,1-Dichloroethane	50	50		1	99	70-130	06/22/2017 0922
trans-1,2-Dichloroethene	50	53		1	106	70-130	06/22/2017 0922
cis-1,2-Dichloroethene	50	51		1	103	70-130	06/22/2017 0922
1,1-Dichloroethene	50	51		1	101	70-130	06/22/2017 0922
1,2-Dichloropropane	50	53		1	106	70-130	06/22/2017 0922
trans-1,3-Dichloropropene	50	53		1	106	70-130	06/22/2017 0922
cis-1,3-Dichloropropene	50	56		1	112	70-130	06/22/2017 0922
Ethylbenzene	50	53		1	106	70-130	06/22/2017 0922
2-Hexanone	100	95		1	95	70-130	06/22/2017 0922
Isopropylbenzene	50	54		1	107	70-130	06/22/2017 0922
Methyl acetate	50	48		1	96	70-130	06/22/2017 0922
Methyl tertiary butyl ether (MTBE)	50	43		1	85	70-130	06/22/2017 0922
4-Methyl-2-pentanone	100	96		1	96	70-130	06/22/2017 0922
Methylcyclohexane	50	52		1	104	70-130	06/22/2017 0922
Methylene chloride	50	49		1	98	70-130	06/22/2017 0922
Styrene	50	53		1	107	70-130	06/22/2017 0922
1,1,2,2-Tetrachloroethane	50	53		1	106	70-130	06/22/2017 0922
Tetrachloroethene	50	55		1	109	70-130	06/22/2017 0922
Toluene	50	54		1	108	70-130	06/22/2017 0922
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	53		1	105	70-130	06/22/2017 0922
1,2,4-Trichlorobenzene	50	47		1	94	70-130	06/22/2017 0922
1,1,2-Trichloroethane	50	50		1	100	70-130	06/22/2017 0922
1,1,1-Trichloroethane	50	54		1	108	70-130	06/22/2017 0922

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ44933-002

Matrix: Aqueous

Batch: 44933

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	53		1	106	70-130	06/22/2017 0922
Trichlorofluoromethane	50	51		1	102	70-130	06/22/2017 0922
Vinyl chloride	50	55		1	111	70-130	06/22/2017 0922
Xylenes (total)	100	110		1	105	70-130	06/22/2017 0922
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		102			70-130		
1,2-Dichloroethane-d4		87			70-130		
Toluene-d8		101			70-130		

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45050-001

Matrix: Aqueous

Batch: 45050

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	06/23/2017 1013
Benzene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Bromodichloromethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Bromoform	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	06/23/2017 1013
2-Butanone (MEK)	ND		1	10	2.0	ug/L	06/23/2017 1013
Carbon disulfide	0.42	J	1	5.0	0.40	ug/L	06/23/2017 1013
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Chlorobenzene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Chloroethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Chloroform	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Cyclohexane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Dibromochloromethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Ethylbenzene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
2-Hexanone	ND		1	10	2.0	ug/L	06/23/2017 1013
Isopropylbenzene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Methyl acetate	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	06/23/2017 1013
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	06/23/2017 1013
Methylcyclohexane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Methylene chloride	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Styrene	ND		1	5.0	0.41	ug/L	06/23/2017 1013
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Tetrachloroethene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Toluene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	06/23/2017 1013
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45050-001

Matrix: Aqueous

Batch: 45050

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Vinyl chloride	ND		1	2.0	0.40	ug/L	06/23/2017 1013
Xylenes (total)	ND		1	5.0	0.40	ug/L	06/23/2017 1013
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		112	70-130				
1,2-Dichloroethane-d4		94	70-130				
Toluene-d8		106	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45050-002

Matrix: Aqueous

Batch: 45050

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	40	39		1	98	60-140	06/23/2017 0916
Benzene	20	20		1	102	70-130	06/23/2017 0916
Bromodichloromethane	20	20		1	101	70-130	06/23/2017 0916
Bromoform	20	21		1	103	70-130	06/23/2017 0916
Bromomethane (Methyl bromide)	20	21		1	105	70-130	06/23/2017 0916
2-Butanone (MEK)	40	40		1	101	70-130	06/23/2017 0916
Carbon disulfide	20	22		1	109	70-130	06/23/2017 0916
Carbon tetrachloride	20	21		1	103	70-130	06/23/2017 0916
Chlorobenzene	20	21		1	103	70-130	06/23/2017 0916
Chloroethane	20	21		1	106	70-130	06/23/2017 0916
Chloroform	20	20		1	101	70-130	06/23/2017 0916
Chloromethane (Methyl chloride)	20	19		1	95	60-140	06/23/2017 0916
Cyclohexane	20	21		1	103	70-130	06/23/2017 0916
1,2-Dibromo-3-chloropropane (DBCP)	20	21		1	103	70-130	06/23/2017 0916
Dibromochloromethane	20	20		1	102	70-130	06/23/2017 0916
1,2-Dibromoethane (EDB)	20	20		1	100	70-130	06/23/2017 0916
1,2-Dichlorobenzene	20	20		1	102	70-130	06/23/2017 0916
1,4-Dichlorobenzene	20	21		1	104	70-130	06/23/2017 0916
1,3-Dichlorobenzene	20	21		1	104	70-130	06/23/2017 0916
Dichlorodifluoromethane	20	19		1	94	60-140	06/23/2017 0916
1,2-Dichloroethane	20	20		1	100	70-130	06/23/2017 0916
1,1-Dichloroethane	20	20		1	101	70-130	06/23/2017 0916
cis-1,2-Dichloroethene	20	20		1	100	70-130	06/23/2017 0916
1,1-Dichloroethene	20	20		1	99	70-130	06/23/2017 0916
trans-1,2-Dichloroethene	20	21		1	105	70-130	06/23/2017 0916
1,2-Dichloropropane	20	21		1	104	70-130	06/23/2017 0916
trans-1,3-Dichloropropene	20	20		1	102	70-130	06/23/2017 0916
cis-1,3-Dichloropropene	20	21		1	106	70-130	06/23/2017 0916
Ethylbenzene	20	21		1	104	70-130	06/23/2017 0916
2-Hexanone	40	38		1	96	70-130	06/23/2017 0916
Isopropylbenzene	20	21		1	107	70-130	06/23/2017 0916
Methyl acetate	20	19		1	95	70-130	06/23/2017 0916
Methyl tertiary butyl ether (MTBE)	20	17		1	84	70-130	06/23/2017 0916
4-Methyl-2-pentanone	40	38		1	96	70-130	06/23/2017 0916
Methylcyclohexane	20	20		1	100	70-130	06/23/2017 0916
Methylene chloride	20	19		1	97	70-130	06/23/2017 0916
Styrene	20	21		1	105	70-130	06/23/2017 0916
1,1,2,2-Tetrachloroethane	20	20		1	101	70-130	06/23/2017 0916
Tetrachloroethene	20	21		1	104	70-130	06/23/2017 0916
Toluene	20	21		1	105	70-130	06/23/2017 0916
1,1,2-Trichloro-1,2,2-Trifluoroethane	20	21		1	103	70-130	06/23/2017 0916
1,2,4-Trichlorobenzene	20	20		1	99	70-130	06/23/2017 0916
1,1,2-Trichloroethane	20	20		1	98	70-130	06/23/2017 0916
1,1,1-Trichloroethane	20	21		1	104	70-130	06/23/2017 0916

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45050-002

Matrix: Aqueous

Batch: 45050

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichlorofluoromethane	20	17		1	85	70-130	06/23/2017 0916
Vinyl chloride	20	20		1	99	70-130	06/23/2017 0916
Xylenes (total)	40	41		1	104	70-130	06/23/2017 0916
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		109			70-130		
1,2-Dichloroethane-d4		91			70-130		
Toluene-d8		104			70-130		

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45116-001

Matrix: Aqueous

Batch: 45116

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/23/2017 2124
Trichloroethene	ND		1	5.0	0.40	ug/L	06/23/2017 2124
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		111	70-130				
1,2-Dichloroethane-d4		90	70-130				
Toluene-d8		105	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45116-002

Matrix: Aqueous

Batch: 45116

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
cis-1,2-Dichloroethene	50	49		1	99	70-130	06/23/2017 2028
Trichloroethene	50	54		1	108	70-130	06/23/2017 2028
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		114	70-130				
1,2-Dichloroethane-d4		90	70-130				
Toluene-d8		108	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45344-001

Matrix: Aqueous

Batch: 45344

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	06/27/2017 2125
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		111	70-130				
1,2-Dichloroethane-d4		85	70-130				
Toluene-d8		104	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45344-002

Matrix: Aqueous

Batch: 45344

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	48		1	95	70-130	06/27/2017 2032
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		106	70-130				
1,2-Dichloroethane-d4		82	70-130				
Toluene-d8		101	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: SF20036-010MS

Matrix: Aqueous

Batch: 45344

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	1000	1000	2100		20	106	70-130	06/28/2017 0247

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: SF20036-010MD

Matrix: Aqueous

Batch: 45344

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	1000	1000	2100		20	107	0.32	70-130	20	06/28/2017 0310

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-AES Metals - MB

Sample ID: SQ44722-001

Matrix: Aqueous

Batch: 44722

Prep Method: 3005A

Analytical Method: 6010D

Prep Date: 06/20/2017 1720

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Iron	ND		1	0.10	0.040	mg/L	06/21/2017 1340
Manganese	ND		1	0.015	0.0019	mg/L	06/21/2017 1340

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Page: 107 of 112

ICP-AES Metals - LCS

Sample ID: SQ44722-002

Matrix: Aqueous

Batch: 44722

Prep Method: 3005A

Analytical Method: 6010D

Prep Date: 06/20/2017 1720

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Iron	20	19		1	95	80-120	06/21/2017 1354
Manganese	2.0	2.0		1	100	80-120	06/21/2017 1354

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-AES Metals - MB

Sample ID: SQ44722-001

Matrix: Aqueous

Batch: 44722

Prep Method: 3005A

Analytical Method: 6010D

Prep Date: 06/20/2017 1720

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Dissolved Manganese	ND		1	0.015	0.0019	mg/L	06/21/2017 1340

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Page: 109 of 112

ICP-AES Metals - LCS

Sample ID: SQ44722-002

Matrix: Aqueous

Batch: 44722

Prep Method: 3005A

Analytical Method: 6010D

Prep Date: 06/20/2017 1720

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Dissolved Manganese	2.0	2.0		1	100	80-120	06/21/2017 1354

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-AES Metals - MS

Sample ID: SF20036-001MS

Batch:44722

Analytical Method: 6010D

Matrix: Aqueous

Prep Method: 3005A

Prep Date: 06/20/2017 1720

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Dissolved Manganese	0.018	2.0	2.0		1	99	75-125	06/21/2017 1407

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-AES Metals - MSD

Sample ID: SF20036-001MD

Batch: 44722

Analytical Method: 6010D

Matrix: Aqueous

Prep Method: 3005A

Prep Date: 06/20/2017 1720

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Dissolved Manganese	0.018	2.0	2.0		1	97	2.2	75-125	20	06/21/2017 1411

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number **73657**

Chain of Custody Record

Client AECOM	Report to Contact Scott Cross	Telephone No. / E-mail (803) 254-4400 / scott.cross@aecom.com	Gumie No. comy
Address 101 Olse Search Dr.		Analysis (Attach list if more space is needed)	
City Columbia	State SC	Zip Code 29203	Page 1 of 1
Project Name Spikesville - Newberg - Phase II-18	X Justin Butler <i>Elliot H. Hering</i> Printed Name Signature X Justin Butler <i>Elliot H. Hering</i> Printed Name Signature		
Project No. 60534823	F.O. No.	X Tel 100 (4) X Ferry brook (3) X Sulfide (3) X SO₄/A/B (4) X Dissolved Mn (5) X Toxin Mn (2) X Free Iron	
Sample ID / Description (Containers for each sample may be identified on one list.)	Date	Remarks / Cooler I.D.	
MW1	6/19/17 1200		
MW6	1150		
MW60	1350		
MW7E	1600		
MW8	1405		
MW10	1515		
MW18D	1640		
MW-6-a	1150		
MW-2D	6/20/17 0930		
MW-10F	1025		
Sample Disposal <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposed by Lab		Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	
1. Relinquished by Elliott Hering Date: 6/20/17 1359		CC Requirements (Specify): Date: _____ Time: _____ Date: _____ Time: _____ Date: _____ Time: _____	
2. Relinquished by Date: _____ Time: _____		Date: 6/20/17 1359	
3. Relinquished by Date: _____ Time: _____		Receipt Temp: 46.63.3	
4. Relinquished by Date: _____ Time: _____		Laboratory received by S. Elliott	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.			

SHEALY ENVIRONMENTAL SERVICES, INC.

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 73658

Chain of Custody Record

Client AFEM	Report to Contact Scott Glass	Telephone No. / E-mail (803) 254-4400 / Scott.Glass@afem.com	Quote No. 2 of 2																																																																																																																																																																																																																																																																																																															
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TC VOCs (1)	X	TC VOCs (1)	TCV (2)	X	TCV (2)	TCV (3)	X	TCV (3)	TCV (4)	X	TCV (4)	TCV (5)	X	TCV (5)	TCV (6)	X	TCV (6)	TCV (7)	X	TCV (7)	TCV (8)	X	TCV (8)	TCV (9)	X	TCV (9)	TCV (10)	X	TCV (10)	TCV (11)	X	TCV (11)	TCV (12)	X	TCV (12)	TCV (13)	X	TCV (13)	TCV (14)	X	TCV (14)	TCV (15)	X	TCV (15)	TCV (16)	X	TCV (16)	TCV (17)	X	TCV (17)	TCV (18)	X	TCV (18)	TCV (19)	X	TCV (19)	TCV (20)	X	TCV (20)	TCV (21)	X	TCV (21)	TCV (22)	X	TCV (22)	TCV (23)	X	TCV (23)	TCV (24)	X	TCV (24)	TCV (25)	X	TCV (25)	TCV (26)	X	TCV (26)	TCV (27)	X	TCV (27)	TCV (28)	X	TCV (28)	TCV (29)	X	TCV (29)	TCV (30)	X	TCV (30)	TCV (31)	X	TCV (31)	TCV (32)	X	TCV (32)	TCV (33)	X	TCV (33)	TCV (34)	X	TCV (34)	TCV (35)	X	TCV (35)	TCV (36)	X	TCV (36)	TCV (37)	X	TCV (37)	TCV (38)	X	TCV (38)	TCV (39)	X	TCV (39)	TCV (40)	X	TCV (40)	TCV (41)	X	TCV (41)	TCV (42)	X	TCV (42)	TCV (43)	X	TCV (43)	TCV (44)	X	TCV (44)	TCV (45)	X	TCV (45)	TCV (46)	X	TCV (46)	TCV (47)	X	TCV (47)	TCV (48)	X	TCV (48)	TCV (49)	X	TCV (49)	TCV (50)	X	TCV (50)	TCV (51)	X	TCV (51)	TCV (52)	X	TCV (52)	TCV (53)	X	TCV (53)	TCV (54)	X	TCV (54)	TCV (55)	X	TCV (55)	TCV (56)	X	TCV (56)	TCV (57)	X	TCV (57)	TCV (58)	X	TCV (58)	TCV (59)	X	TCV (59)	TCV (60)	X	TCV (60)	TCV (61)	X	TCV (61)	TCV (62)	X	TCV (62)	TCV (63)	X	TCV (63)	TCV (64)	X	TCV (64)	TCV (65)	X	TCV (65)	TCV (66)	X	TCV (66)	TCV (67)	X	TCV (67)	TCV (68)	X	TCV (68)	TCV (69)	X	TCV (69)	TCV (70)	X	TCV (70)	TCV (71)	X	TCV (71)	TCV (72)	X	TCV (72)	TCV (73)	X	TCV (73)	TCV (74)	X	TCV (74)	TCV (75)	X	TCV (75)	TCV (76)	X	TCV (76)	TCV (77)	X	TCV (77)	TCV (78)	X	TCV (78)	TCV (79)	X	TCV (79)	TCV (80)	X	TCV (80)	TCV (81)	X	TCV (81)	TCV (82)	X	TCV (82)	TCV (83)	X	TCV (83)	TCV (84)	X	TCV (84)	TCV (85)	X	TCV (85)	TCV (86)	X	TCV (86)	TCV (87)	X	TCV (87)	TCV (88)	X	TCV (88)	TCV (89)	X	TCV (89)	TCV (90)	X	TCV (90)	TCV (91)	X	TCV (91)	TCV (92)	X	TCV (92)	TCV (93)	X	TCV (93)	TCV (94)	X	TCV (94)	TCV (95)	X	TCV (95)	TCV (96)	X	TCV (96)	TCV (97)	X	TCV (97)	TCV (98)	X	TCV (98)	TCV (99)	X	TCV (99)	TCV (100)	X	TCV (100)
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Sampler's Signature Justin Baker		Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Poison <input type="checkbox"/> Unknown																																																																																																																																																																																																																																																																																																																
Printed Name Justin Baker		1. Received by Date: 6/20/17 Time: 1355																																																																																																																																																																																																																																																																																																																
Project Name Shopspeare - Newburg - Phase II B1		2. Received by Date: _____ Time: _____																																																																																																																																																																																																																																																																																																																
Project No. 29203		3. Received by Date: _____ Time: _____																																																																																																																																																																																																																																																																																																																
Date 6/20/17		4. Laboratory received by Date: _____ Time: _____																																																																																																																																																																																																																																																																																																																
Time 1050		Note: All samples are retained for four weeks from receipt unless other arrangements are made.																																																																																																																																																																																																																																																																																																																
Time 1200		LAB USE ONLY Received on Ice (Circle) <input checked="" type="radio"/> Yes <input type="radio"/> No																																																																																																																																																																																																																																																																																																																
Time 1200		Receipt Temp: 62.3°C																																																																																																																																																																																																																																																																																																																

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-08

Page 1 of 1
Effective Date: 03/07/2017
Expiry Date: 03/07/2022

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: CCT/6/20/17 Lot #: SF20086

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other _____		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
pH strip ID: <u>17-854 & 15-148</u> Cl strip ID: <u>17-840</u>		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>4.6/4.6°C</u> <u>13.3/3.3°C</u> / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input checked="" type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were any samples containers <u>missing/access</u> (circle one) samples Not listed on COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	16. Were bubbles present > "pea-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA (< 0.5mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	22. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) <u>001/004</u> were received with bubbles > 6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.5 mg/L (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: _____		
SC Drinking Water Project Sample(s) pH verified to be < 2 by _____ Date: _____		
Sample(s) _____ were Not received at a pH of < 2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>CCT</u> Verified by: _____ Date: <u>6/20/17</u>		

Comments: Did not receive trip blank. Received samples 001-003 expired.

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: Shakespeare - Newberry

Lot Number: **SF22082**

Date Completed: 06/26/2017
Revision Date: 08/17/2017

N. Saikaly

08/17/2017 11:44 AM
Approved and released by:
Project Manager: Nisreen Saikaly



The electronic signature above is the equivalent of a handwritten signature.
This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative AECOM Lot Number: SF22082

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: SF22082

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-18	Aqueous	06/20/2017 1450	06/22/2017
002	MW-3D	Aqueous	06/21/2017 1000	06/22/2017
003	MW-3D-a	Aqueous	06/21/2017 1000	06/22/2017
004	MW-5I	Aqueous	06/21/2017 1200	06/22/2017
005	SDW-1	Aqueous	06/21/2017 1220	06/22/2017
006	MW-2I	Aqueous	06/21/2017 1325	06/22/2017
007	RDW-1	Aqueous	06/21/2017 1405	06/22/2017
008	MW-9I	Aqueous	06/21/2017 1505	06/22/2017
009	PW-4	Aqueous	06/21/2017 1520	06/22/2017
010	MW-9D	Aqueous	06/22/2017 1000	06/22/2017
011	MW-12I	Aqueous	06/22/2017 1310	06/22/2017
012	Boazman Well	Aqueous	06/22/2017 1435	06/22/2017
013	MW-2D	Aqueous	06/22/2017 1510	06/22/2017
014	MW-2D-a	Aqueous	06/22/2017 1510	06/22/2017
015	SDW-2	Aqueous	06/22/2017 1535	06/22/2017
016	Trip Blank	Aqueous	06/22/2017	06/22/2017

(16 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Detection Summary

AECOM

Lot Number: SF22082

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-18	Aqueous	Trichloroethene	8260B	7.3		ug/L	6
002	MW-3D	Aqueous	cis-1,2-Dichloroethene	8260B	11		ug/L	7
002	MW-3D	Aqueous	Tetrachloroethene	8260B	0.44	J	ug/L	7
002	MW-3D	Aqueous	Trichloroethene	8260B	16		ug/L	8
003	MW-3D-a	Aqueous	cis-1,2-Dichloroethene	8260B	11		ug/L	9
003	MW-3D-a	Aqueous	Tetrachloroethene	8260B	0.47	J	ug/L	9
003	MW-3D-a	Aqueous	Trichloroethene	8260B	15		ug/L	10
004	MW-5I	Aqueous	cis-1,2-Dichloroethene	8260B	5.1	J	ug/L	11
004	MW-5I	Aqueous	Trichloroethene	8260B	200		ug/L	12
005	SDW-1	Aqueous	cis-1,2-Dichloroethene	8260B	0.56	J	ug/L	13
005	SDW-1	Aqueous	Trichloroethene	8260B	10		ug/L	14
006	MW-2I	Aqueous	Trichloroethene	8260B	24		ug/L	16
007	RDW-1	Aqueous	Acetone	8260B	5.4	J	ug/L	17
007	RDW-1	Aqueous	cis-1,2-Dichloroethene	8260B	2.1	J	ug/L	17
007	RDW-1	Aqueous	Tetrachloroethene	8260B	0.66	J	ug/L	17
007	RDW-1	Aqueous	Trichloroethene	8260B	110		ug/L	18
008	MW-9I	Aqueous	Chloroform	8260B	0.42	J	ug/L	19
008	MW-9I	Aqueous	Trichloroethene	8260B	2.2	J	ug/L	20
010	MW-9D	Aqueous	Trichloroethene	8260B	1.5	J	ug/L	22
011	MW-12I	Aqueous	cis-1,2-Dichloroethene	8260B	2.6	J	ug/L	23
011	MW-12I	Aqueous	Trichloroethene	8260B	1.2	J	ug/L	24
015	SDW-2	Aqueous	Acetone	8260B	25		ug/L	29
015	SDW-2	Aqueous	Chloromethane (Methyl	8260B	0.42	J	ug/L	29
015	SDW-2	Aqueous	Toluene	8260B	0.85	J	ug/L	29
016	Trip Blank	Aqueous	Acetone	8260B	8.0	J	ug/L	31
016	Trip Blank	Aqueous	Carbon disulfide	8260B	0.61	BJ	ug/L	31

(26 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-001
Description: MW-18	Matrix: Aqueous
Date Sampled: 06/20/2017 1450	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1517	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-001
Description: MW-18	Matrix: Aqueous
Date Sampled: 06/20/2017 1450	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1517	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	7.3		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	70-130
Bromofluorobenzene		116	70-130
Toluene-d8		109	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-002
Description: MW-3D	Matrix: Aqueous
Date Sampled: 06/21/2017 1000	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1540	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	11		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	0.44	J	5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-002
Description: MW-3D	Matrix: Aqueous
Date Sampled: 06/21/2017 1000	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1540	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	16		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	70-130
Bromofluorobenzene		109	70-130
Toluene-d8		106	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-003
Description: MW-3D-a	Matrix: Aqueous
Date Sampled: 06/21/2017 1000	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1604	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	11		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	0.47	J	5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-003
Description: MW-3D-a	Matrix: Aqueous
Date Sampled: 06/21/2017 1000	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1604	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	15		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		105	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-004
Description: MW-5I	Matrix: Aqueous
Date Sampled: 06/21/2017 1200	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	06/24/2017 1628	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		100	10	ug/L	1
Benzene	71-43-2	8260B	ND		25	2.0	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		25	2.0	ug/L	1
Bromoform	75-25-2	8260B	ND		25	2.0	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		25	2.0	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		50	10	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		25	2.0	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		25	2.0	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		25	2.0	ug/L	1
Chloroethane	75-00-3	8260B	ND		25	2.0	ug/L	1
Chloroform	67-66-3	8260B	ND		25	2.0	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		25	2.0	ug/L	1
Cyclohexane	110-82-7	8260B	ND		25	2.0	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		25	2.0	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		25	2.0	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		25	2.0	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		25	2.0	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		25	2.0	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		25	2.0	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		25	2.0	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		25	2.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		25	2.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		25	2.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	5.1	J	25	2.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		25	2.0	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		25	2.0	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		25	2.0	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		25	2.0	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		25	2.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		50	10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		25	2.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		25	2.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		25	2.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		50	10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		25	2.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		25	2.0	ug/L	1
Styrene	100-42-5	8260B	ND		25	2.1	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		25	2.0	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		25	2.0	ug/L	1
Toluene	108-88-3	8260B	ND		25	2.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		25	2.1	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		25	2.0	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		25	2.0	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		25	2.0	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-004
Description: MW-5I	Matrix: Aqueous
Date Sampled: 06/21/2017 1200	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	06/24/2017 1628	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	200		25	2.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		25	2.0	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		10	2.0	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	2.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		111	70-130
Toluene-d8		107	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-005
Description: SDW-1	Matrix: Aqueous
Date Sampled: 06/21/2017 1220	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1652	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	0.56	J	5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-005
Description: SDW-1	Matrix: Aqueous
Date Sampled: 06/21/2017 1220	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1652	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	10		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	70-130
Bromofluorobenzene		112	70-130
Toluene-d8		106	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-006
Description: MW-2I	Matrix: Aqueous
Date Sampled: 06/21/2017 1325	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1715	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-006
Description: MW-2I	Matrix: Aqueous
Date Sampled: 06/21/2017 1325	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1715	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	24		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	70-130
Bromofluorobenzene		113	70-130
Toluene-d8		109	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-007
Description: RDW-1	Matrix: Aqueous
Date Sampled: 06/21/2017 1405	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1738	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	5.4	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	2.1	J	5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	0.66	J	5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-007
Description: RDW-1	Matrix: Aqueous
Date Sampled: 06/21/2017 1405	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1738	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	110		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	70-130
Bromofluorobenzene		113	70-130
Toluene-d8		106	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-008
Description: MW-9I	Matrix: Aqueous
Date Sampled: 06/21/2017 1505	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1801	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	0.42	J	5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-008
Description: MW-9I	Matrix: Aqueous
Date Sampled: 06/21/2017 1505	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1801	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	2.2	J	5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		110	70-130
Toluene-d8		106	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-010
Description: MW-9D	Matrix: Aqueous
Date Sampled: 06/22/2017 1000	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1825	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-010
Description: MW-9D	Matrix: Aqueous
Date Sampled: 06/22/2017 1000	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1825	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	1.5	J	5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		87	70-130
Bromofluorobenzene		107	70-130
Toluene-d8		103	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-011
Description: MW-12I	Matrix: Aqueous
Date Sampled: 06/22/2017 1310	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1849	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	2.6	J	5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-011
Description: MW-12I	Matrix: Aqueous
Date Sampled: 06/22/2017 1310	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1849	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	1.2	J	5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	70-130
Bromofluorobenzene		111	70-130
Toluene-d8		106	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-013
Description: MW-2D	Matrix: Aqueous
Date Sampled: 06/22/2017 1510	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1913	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-013
Description: MW-2D	Matrix: Aqueous
Date Sampled: 06/22/2017 1510	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1913	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130
Bromofluorobenzene		115	70-130
Toluene-d8		109	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-014
Description: MW-2D-a	Matrix: Aqueous
Date Sampled: 06/22/2017 1510	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1936	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-014
Description: MW-2D-a	Matrix: Aqueous
Date Sampled: 06/22/2017 1510	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1936	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	70-130
Bromofluorobenzene		109	70-130
Toluene-d8		103	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-015
Description: SDW-2	Matrix: Aqueous
Date Sampled: 06/22/2017 1535	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1959	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	25		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	0.42	J	5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	0.85	J	5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-015
Description: SDW-2	Matrix: Aqueous
Date Sampled: 06/22/2017 1535	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1959	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		109	70-130
Toluene-d8		105	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-016
Description: Trip Blank	Matrix: Aqueous
Date Sampled: 06/22/2017	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1429	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	8.0	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	0.61	BJ	5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF22082-016
Description: Trip Blank	Matrix: Aqueous
Date Sampled: 06/22/2017	
Date Received: 06/22/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/24/2017 1429	TML		45134

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	70-130
Bromofluorobenzene		109	70-130
Toluene-d8		105	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45134-001

Matrix: Aqueous

Batch: 45134

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	06/24/2017 1401
Benzene	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Bromodichloromethane	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Bromoform	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	06/24/2017 1401
2-Butanone (MEK)	ND		1	10	2.0	ug/L	06/24/2017 1401
Carbon disulfide	0.57	J	1	5.0	0.40	ug/L	06/24/2017 1401
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Chlorobenzene	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Chloroethane	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Chloroform	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Cyclohexane	ND		1	5.0	0.40	ug/L	06/24/2017 1401
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Dibromochloromethane	ND		1	5.0	0.40	ug/L	06/24/2017 1401
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	06/24/2017 1401
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/24/2017 1401
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/24/2017 1401
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	06/24/2017 1401
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	06/24/2017 1401
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	06/24/2017 1401
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	06/24/2017 1401
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/24/2017 1401
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/24/2017 1401
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	06/24/2017 1401
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/24/2017 1401
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Ethylbenzene	ND		1	5.0	0.40	ug/L	06/24/2017 1401
2-Hexanone	ND		1	10	2.0	ug/L	06/24/2017 1401
Isopropylbenzene	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Methyl acetate	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	06/24/2017 1401
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	06/24/2017 1401
Methylcyclohexane	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Methylene chloride	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Styrene	ND		1	5.0	0.41	ug/L	06/24/2017 1401
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Tetrachloroethene	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Toluene	ND		1	5.0	0.40	ug/L	06/24/2017 1401
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	06/24/2017 1401
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	06/24/2017 1401
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	06/24/2017 1401
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	06/24/2017 1401

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45134-001

Matrix: Aqueous

Batch: 45134

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Vinyl chloride	ND		1	2.0	0.40	ug/L	06/24/2017 1401
Xylenes (total)	ND		1	5.0	0.40	ug/L	06/24/2017 1401
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		88	70-130				
Bromofluorobenzene		110	70-130				
Toluene-d8		105	70-130				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45134-002

Matrix: Aqueous

Batch: 45134

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	91		1	91	60-140	06/24/2017 1307
Benzene	50	49		1	98	70-130	06/24/2017 1307
Bromodichloromethane	50	49		1	99	70-130	06/24/2017 1307
Bromoform	50	54		1	108	70-130	06/24/2017 1307
Bromomethane (Methyl bromide)	50	56		1	112	70-130	06/24/2017 1307
2-Butanone (MEK)	100	97		1	97	70-130	06/24/2017 1307
Carbon disulfide	50	46		1	93	70-130	06/24/2017 1307
Carbon tetrachloride	50	46		1	92	70-130	06/24/2017 1307
Chlorobenzene	50	52		1	104	70-130	06/24/2017 1307
Chloroethane	50	55		1	110	70-130	06/24/2017 1307
Chloroform	50	45		1	90	70-130	06/24/2017 1307
Chloromethane (Methyl chloride)	50	40		1	79	60-140	06/24/2017 1307
Cyclohexane	50	45		1	90	70-130	06/24/2017 1307
1,2-Dibromo-3-chloropropane (DBCP)	50	51		1	102	70-130	06/24/2017 1307
Dibromochloromethane	50	53		1	107	70-130	06/24/2017 1307
1,2-Dibromoethane (EDB)	50	52		1	104	70-130	06/24/2017 1307
1,2-Dichlorobenzene	50	52		1	103	70-130	06/24/2017 1307
1,3-Dichlorobenzene	50	52		1	103	70-130	06/24/2017 1307
1,4-Dichlorobenzene	50	53		1	106	70-130	06/24/2017 1307
Dichlorodifluoromethane	50	44		1	88	60-140	06/24/2017 1307
1,1-Dichloroethane	50	46		1	92	70-130	06/24/2017 1307
1,2-Dichloroethane	50	47		1	94	70-130	06/24/2017 1307
1,1-Dichloroethene	50	45		1	89	70-130	06/24/2017 1307
cis-1,2-Dichloroethene	50	46		1	91	70-130	06/24/2017 1307
trans-1,2-Dichloroethene	50	47		1	93	70-130	06/24/2017 1307
1,2-Dichloropropane	50	51		1	101	70-130	06/24/2017 1307
cis-1,3-Dichloropropene	50	52		1	104	70-130	06/24/2017 1307
trans-1,3-Dichloropropene	50	52		1	103	70-130	06/24/2017 1307
Ethylbenzene	50	53		1	105	70-130	06/24/2017 1307
2-Hexanone	100	100		1	101	70-130	06/24/2017 1307
Isopropylbenzene	50	53		1	106	70-130	06/24/2017 1307
Methyl acetate	50	45		1	90	70-130	06/24/2017 1307
Methyl tertiary butyl ether (MTBE)	50	39		1	78	70-130	06/24/2017 1307
4-Methyl-2-pentanone	100	96		1	96	70-130	06/24/2017 1307
Methylcyclohexane	50	46		1	92	70-130	06/24/2017 1307
Methylene chloride	50	44		1	89	70-130	06/24/2017 1307
Styrene	50	53		1	107	70-130	06/24/2017 1307
1,1,2,2-Tetrachloroethane	50	51		1	103	70-130	06/24/2017 1307
Tetrachloroethene	50	53		1	106	70-130	06/24/2017 1307
Toluene	50	52		1	105	70-130	06/24/2017 1307
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	46		1	92	70-130	06/24/2017 1307
1,2,4-Trichlorobenzene	50	48		1	95	70-130	06/24/2017 1307
1,1,1-Trichloroethane	50	46		1	93	70-130	06/24/2017 1307
1,1,2-Trichloroethane	50	50		1	100	70-130	06/24/2017 1307

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45134-002

Matrix: Aqueous

Batch: 45134

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	49		1	98	70-130	06/24/2017 1307
Trichlorofluoromethane	50	42		1	84	70-130	06/24/2017 1307
Vinyl chloride	50	47		1	95	70-130	06/24/2017 1307
Xylenes (total)	100	100		1	104	70-130	06/24/2017 1307
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		86	70-130				
Bromofluorobenzene		111	70-130				
Toluene-d8		104	70-130				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and \geq DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MS

Sample ID: SF22082-001MS

Matrix: Aqueous

Batch: 45134

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	ND	100	90		1	90	60-140	06/24/2017 2222
Benzene	ND	50	54		1	108	70-130	06/24/2017 2222
Bromodichloromethane	ND	50	53		1	107	70-130	06/24/2017 2222
Bromoform	ND	50	55		1	111	70-130	06/24/2017 2222
Bromomethane (Methyl bromide)	ND	50	61		1	122	70-130	06/24/2017 2222
2-Butanone (MEK)	ND	100	95		1	95	70-130	06/24/2017 2222
Carbon disulfide	ND	50	54		1	107	70-130	06/24/2017 2222
Carbon tetrachloride	ND	50	53		1	105	70-130	06/24/2017 2222
Chlorobenzene	ND	50	56		1	113	70-130	06/24/2017 2222
Chloroethane	ND	50	61		1	123	70-130	06/24/2017 2222
Chloroform	ND	50	50		1	99	70-130	06/24/2017 2222
Chloromethane (Methyl chloride)	ND	50	49		1	97	60-140	06/24/2017 2222
Cyclohexane	ND	50	52		1	105	70-130	06/24/2017 2222
1,2-Dibromo-3-chloropropane (DBCP)	ND	50	50		1	100	70-130	06/24/2017 2222
Dibromochloromethane	ND	50	57		1	114	70-130	06/24/2017 2222
1,2-Dibromoethane (EDB)	ND	50	54		1	107	70-130	06/24/2017 2222
1,2-Dichlorobenzene	ND	50	55		1	110	70-130	06/24/2017 2222
1,3-Dichlorobenzene	ND	50	56		1	112	70-130	06/24/2017 2222
1,4-Dichlorobenzene	ND	50	57		1	113	70-130	06/24/2017 2222
Dichlorodifluoromethane	ND	50	52		1	104	60-140	06/24/2017 2222
1,1-Dichloroethane	ND	50	51		1	102	70-130	06/24/2017 2222
1,2-Dichloroethane	ND	50	50		1	100	70-130	06/24/2017 2222
1,1-Dichloroethene	ND	50	51		1	101	70-130	06/24/2017 2222
cis-1,2-Dichloroethene	ND	50	50		1	100	70-130	06/24/2017 2222
trans-1,2-Dichloroethene	ND	50	53		1	105	70-130	06/24/2017 2222
1,2-Dichloropropane	ND	50	54		1	109	70-130	06/24/2017 2222
cis-1,3-Dichloropropene	ND	50	54		1	108	70-130	06/24/2017 2222
trans-1,3-Dichloropropene	ND	50	53		1	106	70-130	06/24/2017 2222
Ethylbenzene	ND	50	58		1	116	70-130	06/24/2017 2222
2-Hexanone	ND	100	100		1	102	70-130	06/24/2017 2222
Isopropylbenzene	ND	50	59		1	117	70-130	06/24/2017 2222
Methyl acetate	ND	50	39		1	79	70-130	06/24/2017 2222
Methyl tertiary butyl ether (MTBE)	ND	50	40		1	80	70-130	06/24/2017 2222
4-Methyl-2-pentanone	ND	100	98		1	98	70-130	06/24/2017 2222
Methylcyclohexane	ND	50	53		1	106	70-130	06/24/2017 2222
Methylene chloride	ND	50	48		1	96	70-130	06/24/2017 2222
Styrene	ND	50	57		1	113	70-130	06/24/2017 2222
1,1,2,2-Tetrachloroethane	ND	50	55		1	111	70-130	06/24/2017 2222
Tetrachloroethene	ND	50	60		1	120	70-130	06/24/2017 2222
Toluene	ND	50	58		1	116	70-130	06/24/2017 2222
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	53		1	106	70-130	06/24/2017 2222
1,2,4-Trichlorobenzene	ND	50	46		1	91	70-130	06/24/2017 2222
1,1,1-Trichloroethane	ND	50	53		1	105	70-130	06/24/2017 2222
1,1,2-Trichloroethane	ND	50	53		1	106	70-130	06/24/2017 2222

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MS

Sample ID: SF22082-001MS

Matrix: Aqueous

Batch: 45134

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	7.3	50	61		1	108	70-130	06/24/2017 2222
Trichlorofluoromethane	ND	50	50		1	101	70-130	06/24/2017 2222
Vinyl chloride	ND	50	55		1	111	70-130	06/24/2017 2222
Xylenes (total)	ND	100	110		1	114	70-130	06/24/2017 2222
Surrogate	Q	% Rec	Acceptance Limit					
1,2-Dichloroethane-d4		88	70-130					
Bromofluorobenzene		113	70-130					
Toluene-d8		107	70-130					

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MSD

Sample ID: SF22082-001MD

Matrix: Aqueous

Batch: 45134

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	ND	100	88		1	88	2.0	60-140	20	06/24/2017 2245
Benzene	ND	50	53		1	106	1.6	70-130	20	06/24/2017 2245
Bromodichloromethane	ND	50	52		1	105	1.6	70-130	20	06/24/2017 2245
Bromoform	ND	50	55		1	109	1.1	70-130	20	06/24/2017 2245
Bromomethane (Methyl bromide)	ND	50	62		1	124	1.7	70-130	20	06/24/2017 2245
2-Butanone (MEK)	ND	100	91		1	91	4.2	70-130	20	06/24/2017 2245
Carbon disulfide	ND	50	54		1	108	0.74	70-130	20	06/24/2017 2245
Carbon tetrachloride	ND	50	51		1	103	2.3	70-130	20	06/24/2017 2245
Chlorobenzene	ND	50	56		1	111	1.5	70-130	20	06/24/2017 2245
Chloroethane	ND	50	62		1	124	0.78	70-130	20	06/24/2017 2245
Chloroform	ND	50	48		1	97	2.3	70-130	20	06/24/2017 2245
Chloromethane (Methyl chloride)	ND	50	47		1	94	4.0	60-140	20	06/24/2017 2245
Cyclohexane	ND	50	51		1	101	3.8	70-130	20	06/24/2017 2245
1,2-Dibromo-3-chloropropane (DBCP)	ND	50	50		1	99	1.1	70-130	20	06/24/2017 2245
Dibromochloromethane	ND	50	55		1	111	2.7	70-130	20	06/24/2017 2245
1,2-Dibromoethane (EDB)	ND	50	53		1	107	0.50	70-130	20	06/24/2017 2245
1,2-Dichlorobenzene	ND	50	54		1	109	1.5	70-130	20	06/24/2017 2245
1,3-Dichlorobenzene	ND	50	55		1	110	2.0	70-130	20	06/24/2017 2245
1,4-Dichlorobenzene	ND	50	56		1	111	1.7	70-130	20	06/24/2017 2245
Dichlorodifluoromethane	ND	50	51		1	102	1.9	60-140	20	06/24/2017 2245
1,1-Dichloroethane	ND	50	50		1	99	2.7	70-130	20	06/24/2017 2245
1,2-Dichloroethane	ND	50	49		1	99	1.9	70-130	20	06/24/2017 2245
1,1-Dichloroethene	ND	50	50		1	100	2.0	70-130	20	06/24/2017 2245
cis-1,2-Dichloroethene	ND	50	49		1	98	2.1	70-130	20	06/24/2017 2245
trans-1,2-Dichloroethene	ND	50	51		1	102	3.2	70-130	20	06/24/2017 2245
1,2-Dichloropropane	ND	50	54		1	107	1.1	70-130	20	06/24/2017 2245
cis-1,3-Dichloropropene	ND	50	53		1	106	1.2	70-130	20	06/24/2017 2245
trans-1,3-Dichloropropene	ND	50	53		1	106	0.56	70-130	20	06/24/2017 2245
Ethylbenzene	ND	50	57		1	114	1.9	70-130	20	06/24/2017 2245
2-Hexanone	ND	100	100		1	100	1.8	70-130	20	06/24/2017 2245
Isopropylbenzene	ND	50	58		1	115	1.8	70-130	20	06/24/2017 2245
Methyl acetate	ND	50	38		1	76	2.7	70-130	20	06/24/2017 2245
Methyl tertiary butyl ether (MTBE)	ND	50	39		1	78	2.6	70-130	20	06/24/2017 2245
4-Methyl-2-pentanone	ND	100	92		1	92	5.8	70-130	20	06/24/2017 2245
Methylcyclohexane	ND	50	52		1	105	1.5	70-130	20	06/24/2017 2245
Methylene chloride	ND	50	47		1	94	2.3	70-130	20	06/24/2017 2245
Styrene	ND	50	56		1	113	0.61	70-130	20	06/24/2017 2245
1,1,2,2-Tetrachloroethane	ND	50	55		1	110	0.77	70-130	20	06/24/2017 2245
Tetrachloroethene	ND	50	59		1	117	2.4	70-130	20	06/24/2017 2245
Toluene	ND	50	57		1	113	2.7	70-130	20	06/24/2017 2245
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	52		1	104	2.0	70-130	20	06/24/2017 2245
1,2,4-Trichlorobenzene	ND	50	45		1	91	0.25	70-130	20	06/24/2017 2245
1,1,1-Trichloroethane	ND	50	52		1	105	0.61	70-130	20	06/24/2017 2245
1,1,2-Trichloroethane	ND	50	52		1	105	0.93	70-130	20	06/24/2017 2245

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS - MSD

Sample ID: SF22082-001MD

Matrix: Aqueous

Batch: 45134

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
Trichloroethene	7.3	50	61	1		107	0.80	70-130	20	06/24/2017 2245	
Trichlorofluoromethane	ND	50	49	1		98	2.7	70-130	20	06/24/2017 2245	
Vinyl chloride	ND	50	54	1		109	2.2	70-130	20	06/24/2017 2245	
Xylenes (total)	ND	100	110	1		112	1.9	70-130	20	06/24/2017 2245	
Surrogate	Q	% Rec	Acceptance Limit								
1,2-Dichloroethane-d4		87	70-130								
Bromofluorobenzene		111	70-130								
Toluene-d8		107	70-130								

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.



Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 73661

Client AEGOM	Report to Contact Scott Ross	Telephone No. / E-mail 803.254.4400 scott.ross@AEGOM.com	Quote No.																																																																																																																																																																																																																																																													
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Note: All samples are retained for four weeks from receipt unless other arrangements are made.		LAB USE ONLY Received on (or Closes) <i>Yes</i> No <i>No</i> for Pack Recostat Temp. <i>26</i> °C																																																																																																																																																																																																																																																														

Document Number: FAD-133 Effectivity Date: 08-01-2014

DISTRIBUTION: WHITE & YELLOW-Return to Laboratory with Sample(s); PINK-Field/Client Copy

SHEALY ENVIRONMENTAL SERVICES, INC.



Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number **73899**

Client AECOM	Report to Contact Scott Ross	Telephone No. / E-mail 803.254.4400 scott.ross@aecom.com	Quote No.
Address 101 Research Drive	Sampler's Signature <i>[Signature]</i>	Analysis (Attach list if more samples are needed)	Page <u> </u> of <u> </u>
City Columbia	Printed Name Justin Butler Elliott Hand	 SF22082	Remarks / Cooler I.D. * Use drinking water method
State South Carolina	Zip Code 29172		
Project Name Shakespeare - Newberry Phase II RE	P.O. No. 60534283		
Sample ID / Description PW-4 *	Date 6/21/17	Time 1520	
MW-7D	6/22/17	1000	
MW-12E	6/22/17	1310	
Bozeman Well *	6/22/17	1435	
MW-2D	6/22/17	1510	
MW-20-a	6/22/17	1510	
SDW-2	6/22/17	1535	
Trip Blank			

Sample Disposal: <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Dispose by Lab	Possible Hazards Identification		OC Requirements (Specify)	
	Biological	Chemical	Flammable	Toxic
<input type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)	<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Irritant	<input type="checkbox"/> Poison	<input type="checkbox"/> Unknown
1. Relinquished by Elliott Hand	Date 6/21/17	Time 1703		
2. Relinquished by	Date	Time		
3. Relinquished by	Date	Time		
4. Relinquished by	Date	Time		

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
 Received on Job (Check) Yes No for Pack Receipt Temp. **2.6** °C

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-08

Page 1 of 1
Effective Date: 03/07/2017
Expiry Date: 03/07/2022

Sample Receipt Checklist (SRC)

Client: Accom Cooler Inspected by/date: ELC 10/22/17 Lot #: JE22082

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other _____		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 2. If custody seals were present, were they intact and unbroken?
pH strip ID: _____ CI strip ID: _____		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: / / °C <u>12.6/26</u> °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	13. Was adequate sample volume available?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/> 16. Were bubbles present >"pca-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 17. Were all DRO/metals/nutrient samples received at a pH of < 2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 19. Were all applicable NH3/TKN/cyanide/phenol/BNA (< 0.5mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	22. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) <u>Temp Blank</u> were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.5 mg/l. (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: _____		
SC Drinking Water Project Sample(s) pH verified to be < 2 by _____ Date: _____		
Sample(s) _____ were Not received at a pH of < 2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>Erin Calhoun</u> Verified by: _____ Date: <u>6-22-17</u>		

Comments: _____

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare RI**

Project Number: **60534823**

Lot Number: **SF23023**

Date Completed: **06/28/2017**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: SF23023

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: SF23023

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW 19 I	Aqueous	06/23/2017 0835	06/23/2017

(1 sample)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: SF23023

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW 19 I	Aqueous	Acetone	8260B	43		ug/L	5
001	MW 19 I	Aqueous	Tetrachloroethene	8260B	1.1	J	ug/L	6
001	MW 19 I	Aqueous	Toluene	8260B	0.54	J	ug/L	6
001	MW 19 I	Aqueous	Vinyl chloride	8260B	0.40	J	ug/L	6

(4 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF23023-001
Description: MW 19 I	Matrix: Aqueous
Date Sampled: 06/23/2017 0835	
Date Received: 06/23/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/27/2017 1825	TML		45278

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	43		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	1.1	J	5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	0.54	J	5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF23023-001
Description: MW 19 I	Matrix: Aqueous
Date Sampled: 06/23/2017 0835	
Date Received: 06/23/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/27/2017 1825	TML		45278

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	0.40	J	2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		113	70-130
Toluene-d8		105	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45278-001

Matrix: Aqueous

Batch: 45278

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	06/27/2017 1010
Benzene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Bromodichloromethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Bromoform	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	06/27/2017 1010
2-Butanone (MEK)	ND		1	10	2.0	ug/L	06/27/2017 1010
Carbon disulfide	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Chlorobenzene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Chloroethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Chloroform	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Cyclohexane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Dibromochloromethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Ethylbenzene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
2-Hexanone	ND		1	10	2.0	ug/L	06/27/2017 1010
Isopropylbenzene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Methyl acetate	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	06/27/2017 1010
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	06/27/2017 1010
Methylcyclohexane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Methylene chloride	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Styrene	ND		1	5.0	0.41	ug/L	06/27/2017 1010
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Tetrachloroethene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Toluene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	06/27/2017 1010
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45278-001

Matrix: Aqueous

Batch: 45278

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Vinyl chloride	ND		1	2.0	0.40	ug/L	06/27/2017 1010
Xylenes (total)	ND		1	5.0	0.40	ug/L	06/27/2017 1010
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		110	70-130				
1,2-Dichloroethane-d4		85	70-130				
Toluene-d8		104	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45278-002

Matrix: Aqueous

Batch: 45278

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	74		1	74	60-140	06/27/2017 0916
Benzene	50	49		1	98	70-130	06/27/2017 0916
Bromodichloromethane	50	49		1	98	70-130	06/27/2017 0916
Bromoform	50	50		1	101	70-130	06/27/2017 0916
Bromomethane (Methyl bromide)	50	59		1	118	70-130	06/27/2017 0916
2-Butanone (MEK)	100	84		1	84	70-130	06/27/2017 0916
Carbon disulfide	50	48		1	97	70-130	06/27/2017 0916
Carbon tetrachloride	50	46		1	91	70-130	06/27/2017 0916
Chlorobenzene	50	52		1	103	70-130	06/27/2017 0916
Chloroethane	50	57		1	114	70-130	06/27/2017 0916
Chloroform	50	45		1	90	70-130	06/27/2017 0916
Chloromethane (Methyl chloride)	50	47		1	95	60-140	06/27/2017 0916
Cyclohexane	50	45		1	89	70-130	06/27/2017 0916
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	95	70-130	06/27/2017 0916
Dibromochloromethane	50	51		1	102	70-130	06/27/2017 0916
1,2-Dibromoethane (EDB)	50	50		1	100	70-130	06/27/2017 0916
1,4-Dichlorobenzene	50	53		1	106	70-130	06/27/2017 0916
1,3-Dichlorobenzene	50	53		1	107	70-130	06/27/2017 0916
1,2-Dichlorobenzene	50	52		1	103	70-130	06/27/2017 0916
Dichlorodifluoromethane	50	50		1	100	60-140	06/27/2017 0916
1,2-Dichloroethane	50	45		1	90	70-130	06/27/2017 0916
1,1-Dichloroethane	50	45		1	91	70-130	06/27/2017 0916
trans-1,2-Dichloroethene	50	47		1	94	70-130	06/27/2017 0916
cis-1,2-Dichloroethene	50	46		1	92	70-130	06/27/2017 0916
1,1-Dichloroethene	50	44		1	88	70-130	06/27/2017 0916
1,2-Dichloropropane	50	50		1	99	70-130	06/27/2017 0916
trans-1,3-Dichloropropene	50	51		1	102	70-130	06/27/2017 0916
cis-1,3-Dichloropropene	50	51		1	102	70-130	06/27/2017 0916
Ethylbenzene	50	52		1	105	70-130	06/27/2017 0916
2-Hexanone	100	92		1	92	70-130	06/27/2017 0916
Isopropylbenzene	50	51		1	102	70-130	06/27/2017 0916
Methyl acetate	50	41		1	81	70-130	06/27/2017 0916
Methyl tertiary butyl ether (MTBE)	50	37		1	75	70-130	06/27/2017 0916
4-Methyl-2-pentanone	100	86		1	86	70-130	06/27/2017 0916
Methylcyclohexane	50	47		1	94	70-130	06/27/2017 0916
Methylene chloride	50	44		1	89	70-130	06/27/2017 0916
Styrene	50	52		1	105	70-130	06/27/2017 0916
1,1,2,2-Tetrachloroethane	50	52		1	105	70-130	06/27/2017 0916
Tetrachloroethene	50	54		1	107	70-130	06/27/2017 0916
Toluene	50	53		1	106	70-130	06/27/2017 0916
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	46		1	92	70-130	06/27/2017 0916
1,2,4-Trichlorobenzene	50	49		1	98	70-130	06/27/2017 0916
1,1,2-Trichloroethane	50	49		1	99	70-130	06/27/2017 0916
1,1,1-Trichloroethane	50	47		1	94	70-130	06/27/2017 0916

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45278-002

Matrix: Aqueous

Batch: 45278

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	49		1	98	70-130	06/27/2017 0916
Trichlorofluoromethane	50	45		1	89	70-130	06/27/2017 0916
Vinyl chloride	50	52		1	105	70-130	06/27/2017 0916
Xylenes (total)	100	100		1	102	70-130	06/27/2017 0916
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		106	70-130				
1,2-Dichloroethane-d4		82	70-130				
Toluene-d8		104	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

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J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.



SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 70849

Client: A Elom Address: 101 Research Dr. City: Columbia State: SC Zip Code: 29223 Project Name: Shekspere, R.I. Project No.: 60524873	Report to Contact: Scott Ross Sampler's Signature: <i>[Signature]</i> Printed Name: Elliott Hermy	F.O. No.: 6/23/17 Date: 6/23/17 Time: 0835	Analysis: TEL UGS Page 1 of 1	Telephone No. / E-mail: 803-254-4100 Analysis (Attach list if more space is needed): Remarks / Cooler I.D.: SF23023
Turn Around Time Required (Prior lab approval required for expedited TAT): <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)				
Possible Hazard Instructions: <input checked="" type="checkbox"/> Acute-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown				
Sample Disposal: <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab				
1. Relinquished by: Elliott Hermy Date: 6/23/17 Time: 12:50				
2. Relinquished by: _____ Date: _____ Time: _____				
3. Relinquished by: _____ Date: _____ Time: _____				
4. Relinquished by: _____ Date: _____ Time: _____				
Note: All samples are retained for four weeks from receipt unless other arrangements are made.				
LAB USE ONLY Received on ice (Check) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Ice Pack Receipt Temp: 9.7 °C				

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-08

Page 1 of 1
Effective Date: 03/07/2017
Expiry Date: 03/07/2022

Sample Receipt Checklist (SRC)

Client: Aecom

Cooler Inspected by/date: ELC / 6-23-17 Lot #: SF23023

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
2. If custody seals were present, were they intact and unbroken?		
pH strip ID: _____ CI strip ID: _____		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: _____ °C <u>9.7</u> <u>9.7</u> °C _____ °C _____ °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / <u>email</u> / face-to-face (circle one).		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
4. Is the commercial courier's packing slip attached to this form?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
5. Were proper custody procedures (relinquished/received) followed?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
6. Were sample IDs listed on the COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
7. Were sample IDs listed on all sample containers?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
8. Was collection date & time listed on the COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
9. Was collection date & time listed on all sample containers?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
10. Did all container label information (ID, date, time) agree with the COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
11. Were tests to be performed listed on the COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
13. Was adequate sample volume available?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
15. Were any samples containers missing/excess (circle one) samples Not listed on COC?		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
17. Were all DRO/metals/nutrient samples received at a pH of < 2?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
19. Were all applicable NH3/TKN/cyanide/phcnol/BNA (< 0.5mg/L) samples free of residual chlorine?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
20. Were collection temperatures documented on the COC for NC samples?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc....) correctly transcribed from the COC into the comment section in LIMS?		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
22. Was the quote number used taken from the container label?		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.5 mg/L. (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: _____		
SC Drinking Water Project Sample(s) pH verified to be < 2 by _____ Date: _____		
Sample(s) _____ were Not received at a pH of < 2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>Evalell</u> Verified by: _____ Date: <u>6-23-17</u>		

Comments: _____

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare - Newberry**

Lot Number: **SF26019**

Date Completed: **06/27/2017**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: SF26019

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: SF26019

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-19D (45ft)	Aqueous	06/26/2017 1045	06/26/2017
002	Trip Blank	Aqueous	06/26/2017	06/26/2017

(2 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: SF26019

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-19D (45ft)	Aqueous	Bromodichloromethane	8260B	0.72	J	ug/L	5
001	MW-19D (45ft)	Aqueous	Chloroform	8260B	3.1	J	ug/L	5

(2 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF26019-001
Description: MW-19D (45ft)	Matrix: Aqueous
Date Sampled: 06/26/2017 1045	
Date Received: 06/26/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/26/2017 2325	ECP		45253

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	0.72	J	5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	3.1	J	5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF26019-001
Description: MW-19D (45ft)	Matrix: Aqueous
Date Sampled: 06/26/2017 1045	
Date Received: 06/26/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/26/2017 2325	ECP		45253

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		113	70-130
Toluene-d8		108	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF26019-002
Description: Trip Blank	Matrix: Aqueous
Date Sampled: 06/26/2017	
Date Received: 06/26/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/26/2017 2349	ECP		45253

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF26019-002
Description: Trip Blank	Matrix: Aqueous
Date Sampled: 06/26/2017	
Date Received: 06/26/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/26/2017 2349	ECP		45253

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		86	70-130
Bromofluorobenzene		109	70-130
Toluene-d8		104	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45253-001

Matrix: Aqueous

Batch: 45253

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	06/26/2017 2226
Benzene	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Bromodichloromethane	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Bromoform	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	06/26/2017 2226
2-Butanone (MEK)	ND		1	10	2.0	ug/L	06/26/2017 2226
Carbon disulfide	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Chlorobenzene	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Chloroethane	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Chloroform	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Cyclohexane	ND		1	5.0	0.40	ug/L	06/26/2017 2226
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Dibromochloromethane	ND		1	5.0	0.40	ug/L	06/26/2017 2226
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	06/26/2017 2226
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/26/2017 2226
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/26/2017 2226
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	06/26/2017 2226
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	06/26/2017 2226
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	06/26/2017 2226
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/26/2017 2226
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/26/2017 2226
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	06/26/2017 2226
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	06/26/2017 2226
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/26/2017 2226
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Ethylbenzene	ND		1	5.0	0.40	ug/L	06/26/2017 2226
2-Hexanone	ND		1	10	2.0	ug/L	06/26/2017 2226
Isopropylbenzene	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Methyl acetate	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	06/26/2017 2226
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	06/26/2017 2226
Methylcyclohexane	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Methylene chloride	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Styrene	ND		1	5.0	0.41	ug/L	06/26/2017 2226
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Tetrachloroethene	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Toluene	ND		1	5.0	0.40	ug/L	06/26/2017 2226
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	06/26/2017 2226
1,2,4-Trichlorobenzene	0.45	J	1	5.0	0.40	ug/L	06/26/2017 2226
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	06/26/2017 2226
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	06/26/2017 2226

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45253-001

Matrix: Aqueous

Batch: 45253

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Vinyl chloride	ND		1	2.0	0.40	ug/L	06/26/2017 2226
Xylenes (total)	ND		1	5.0	0.40	ug/L	06/26/2017 2226
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		108	70-130				
1,2-Dichloroethane-d4		85	70-130				
Toluene-d8		104	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45253-002

Matrix: Aqueous

Batch: 45253

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	77		1	77	60-140	06/26/2017 2107
Benzene	50	48		1	97	70-130	06/26/2017 2107
Bromodichloromethane	50	48		1	95	70-130	06/26/2017 2107
Bromoform	50	52		1	104	70-130	06/26/2017 2107
Bromomethane (Methyl bromide)	50	61		1	122	70-130	06/26/2017 2107
2-Butanone (MEK)	100	91		1	91	70-130	06/26/2017 2107
Carbon disulfide	50	44		1	88	70-130	06/26/2017 2107
Carbon tetrachloride	50	43		1	86	70-130	06/26/2017 2107
Chlorobenzene	50	51		1	102	70-130	06/26/2017 2107
Chloroethane	50	59		1	118	70-130	06/26/2017 2107
Chloroform	50	43		1	87	70-130	06/26/2017 2107
Chloromethane (Methyl chloride)	50	47		1	93	60-140	06/26/2017 2107
Cyclohexane	50	40		1	80	70-130	06/26/2017 2107
1,2-Dibromo-3-chloropropane (DBCP)	50	51		1	103	70-130	06/26/2017 2107
Dibromochloromethane	50	51		1	103	70-130	06/26/2017 2107
1,2-Dibromoethane (EDB)	50	50		1	101	70-130	06/26/2017 2107
1,4-Dichlorobenzene	50	54		1	108	70-130	06/26/2017 2107
1,3-Dichlorobenzene	50	54		1	107	70-130	06/26/2017 2107
1,2-Dichlorobenzene	50	53		1	106	70-130	06/26/2017 2107
Dichlorodifluoromethane	50	47		1	95	60-140	06/26/2017 2107
1,2-Dichloroethane	50	45		1	90	70-130	06/26/2017 2107
1,1-Dichloroethane	50	44		1	89	70-130	06/26/2017 2107
trans-1,2-Dichloroethene	50	45		1	91	70-130	06/26/2017 2107
cis-1,2-Dichloroethene	50	44		1	88	70-130	06/26/2017 2107
1,1-Dichloroethene	50	43		1	85	70-130	06/26/2017 2107
1,2-Dichloropropane	50	49		1	98	70-130	06/26/2017 2107
trans-1,3-Dichloropropene	50	51		1	101	70-130	06/26/2017 2107
cis-1,3-Dichloropropene	50	50		1	100	70-130	06/26/2017 2107
Ethylbenzene	50	52		1	104	70-130	06/26/2017 2107
2-Hexanone	100	99		1	99	70-130	06/26/2017 2107
Isopropylbenzene	50	50		1	100	70-130	06/26/2017 2107
Methyl acetate	50	44		1	87	70-130	06/26/2017 2107
Methyl tertiary butyl ether (MTBE)	50	36		1	73	70-130	06/26/2017 2107
4-Methyl-2-pentanone	100	93		1	93	70-130	06/26/2017 2107
Methylcyclohexane	50	42		1	83	70-130	06/26/2017 2107
Methylene chloride	50	43		1	86	70-130	06/26/2017 2107
Styrene	50	52		1	104	70-130	06/26/2017 2107
1,1,2,2-Tetrachloroethane	50	56		1	112	70-130	06/26/2017 2107
Tetrachloroethene	50	53		1	106	70-130	06/26/2017 2107
Toluene	50	52		1	105	70-130	06/26/2017 2107
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	41		1	82	70-130	06/26/2017 2107
1,2,4-Trichlorobenzene	50	48		1	95	70-130	06/26/2017 2107
1,1,2-Trichloroethane	50	49		1	99	70-130	06/26/2017 2107
1,1,1-Trichloroethane	50	45		1	89	70-130	06/26/2017 2107

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45253-002

Matrix: Aqueous

Batch: 45253

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	48		1	97	70-130	06/26/2017 2107
Trichlorofluoromethane	50	43		1	87	70-130	06/26/2017 2107
Vinyl chloride	50	52		1	104	70-130	06/26/2017 2107
Xylenes (total)	100	100		1	101	70-130	06/26/2017 2107
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		109	70-130				
1,2-Dichloroethane-d4		85	70-130				
Toluene-d8		108	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 73719

Chain of Custody Record

Client Aecom	Report to Contact S. J. Ross	Telephone No. / Email 803-254-1140 s.j.ross@ae.com	Quote No. 11402	Page 1 of 1
Address 1617 Research Dr Columbia, SC 29223	Sampler's Signature [Signature]	Analysis (Attach list if more space is needed)		
Project Name Sulphur 21	Printed Name Elliott Herring	 SF26019		
Project No. 60534283	Mainx	No of Containers by Preservative type	Number	
Date 6/26/14	Time 10:15	MSM	for I.D.	
Description MWD - 19 D (45ft)	Time ---	NOA		
Description Trip Blank	Time ---	NOA		
GC Requirements (Spacity)				
Turn Around Time Required (Prior lab approval required for expedited RT.)		Possible Hazards Identification		
<input type="checkbox"/> Standard	<input type="checkbox"/> Expedited	<input checked="" type="checkbox"/> Non-Hazard	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Unknown
1. Relinquished by Elliott Herring		2. Received by		
Date 6/26/14	Time 15:21	Date		
2. Relinquished by		2. Received by		
Date		Date		
3. Relinquished by		3. Received by		
Date		Date		
4. Relinquished by		4. Received by		
Date		Date		
Note: All samples are retained for four weeks from receipt unless other arrangements are made.		LAB USE ONLY		
		Received on ice (Circled) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Receipt Temp. 5.2 °C		

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-08

Page 1 of 1
Effective Date: 03/07/2017
Expiry Date: 03/07/2022

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: JSB 1/12/2017 Lot #: SP26019

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other _____		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 2. If custody seals were present, were they intact and unbroken?
pH strip ID: _____ CI strip ID: _____		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>15.2/15.2 °C</u> / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/> 16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 17. Were all DRO/metals/nutrient samples received at a pH of < 2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 19. Were all applicable NH3/TKN/cyanide/phenol/BNA (< 0.5mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	22. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____.		
Sample(s) <u>012211</u> were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.5 mg/L (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: _____.		
SC Drinking Water Project Sample(s) pH verified to be < 2 by _____ Date: _____		
Sample(s) _____ were Not received at a pH of < 2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>JSB</u> Verified by: _____ Date: <u>1/12/17</u>		

Comments: _____

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare - Newberry - Phase II RI**

Project Number: **60534263**

Lot Number: **SF29048**

Date Completed: **06/30/2017**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: SF29048

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: SF29048

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	SDW3(56-66)	Aqueous	06/29/2017 1120	06/29/2017
002	SDW3(86')	Aqueous	06/29/2017 1455	06/29/2017

(2 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: SF29048

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	SDW3(56-66)	Aqueous	Acetone	8260B	14	J	ug/L	5
001	SDW3(56-66)	Aqueous	Bromodichloromethane	8260B	2.6	J	ug/L	5
001	SDW3(56-66)	Aqueous	Chloroform	8260B	17		ug/L	5
001	SDW3(56-66)	Aqueous	Dibromochloromethane	8260B	0.59	J	ug/L	5
001	SDW3(56-66)	Aqueous	Toluene	8260B	0.52	J	ug/L	5
002	SDW3(86')	Aqueous	Bromodichloromethane	8260B	0.98	J	ug/L	7
002	SDW3(86')	Aqueous	Chloroform	8260B	3.5	J	ug/L	7

(7 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF29048-001
Description: SDW3(56-66)	Matrix: Aqueous
Date Sampled: 06/29/2017 1120	
Date Received: 06/29/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/30/2017 0005	ECP		45556

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	14	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	2.6	J	5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	17		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	0.59	J	5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	0.52	J	5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF29048-001
Description: SDW3(56-66)	Matrix: Aqueous
Date Sampled: 06/29/2017 1120	
Date Received: 06/29/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/30/2017 0005	ECP		45556

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		81	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		99	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF29048-002
Description: SDW3(86')	Matrix: Aqueous
Date Sampled: 06/29/2017 1455	
Date Received: 06/29/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/30/2017 0029	ECP		45556

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	0.98	J	5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	3.5	J	5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SF29048-002
Description: SDW3(86')	Matrix: Aqueous
Date Sampled: 06/29/2017 1455	
Date Received: 06/29/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/30/2017 0029	ECP		45556

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		84	70-130
Bromofluorobenzene		107	70-130
Toluene-d8		106	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45556-001

Matrix: Aqueous

Batch: 45556

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	06/29/2017 2215
Benzene	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Bromodichloromethane	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Bromoform	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	06/29/2017 2215
2-Butanone (MEK)	ND		1	10	2.0	ug/L	06/29/2017 2215
Carbon disulfide	0.66	J	1	5.0	0.40	ug/L	06/29/2017 2215
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Chlorobenzene	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Chloroethane	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Chloroform	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Cyclohexane	ND		1	5.0	0.40	ug/L	06/29/2017 2215
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Dibromochloromethane	ND		1	5.0	0.40	ug/L	06/29/2017 2215
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	06/29/2017 2215
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/29/2017 2215
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/29/2017 2215
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	06/29/2017 2215
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	06/29/2017 2215
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	06/29/2017 2215
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/29/2017 2215
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	06/29/2017 2215
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	06/29/2017 2215
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	06/29/2017 2215
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/29/2017 2215
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Ethylbenzene	ND		1	5.0	0.40	ug/L	06/29/2017 2215
2-Hexanone	ND		1	10	2.0	ug/L	06/29/2017 2215
Isopropylbenzene	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Methyl acetate	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	06/29/2017 2215
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	06/29/2017 2215
Methylcyclohexane	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Methylene chloride	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Styrene	ND		1	5.0	0.41	ug/L	06/29/2017 2215
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Tetrachloroethene	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Toluene	ND		1	5.0	0.40	ug/L	06/29/2017 2215
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	06/29/2017 2215
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	06/29/2017 2215
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	06/29/2017 2215
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	06/29/2017 2215

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45556-001

Matrix: Aqueous

Batch: 45556

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Vinyl chloride	ND		1	2.0	0.40	ug/L	06/29/2017 2215
Xylenes (total)	ND		1	5.0	0.40	ug/L	06/29/2017 2215
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		100	70-130				
1,2-Dichloroethane-d4		94	70-130				
Toluene-d8		109	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45556-002

Matrix: Aqueous

Batch: 45556

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	98		1	98	60-140	06/29/2017 2117
Benzene	50	47		1	93	70-130	06/29/2017 2117
Bromodichloromethane	50	46		1	92	70-130	06/29/2017 2117
Bromoform	50	51		1	103	70-130	06/29/2017 2117
Bromomethane (Methyl bromide)	50	47		1	94	70-130	06/29/2017 2117
2-Butanone (MEK)	100	95		1	95	70-130	06/29/2017 2117
Carbon disulfide	50	42		1	84	70-130	06/29/2017 2117
Carbon tetrachloride	50	41		1	82	70-130	06/29/2017 2117
Chlorobenzene	50	50		1	99	70-130	06/29/2017 2117
Chloroethane	50	47		1	94	70-130	06/29/2017 2117
Chloroform	50	41		1	83	70-130	06/29/2017 2117
Chloromethane (Methyl chloride)	50	44		1	88	60-140	06/29/2017 2117
Cyclohexane	50	38		1	76	70-130	06/29/2017 2117
1,2-Dibromo-3-chloropropane (DBCP)	50	50		1	100	70-130	06/29/2017 2117
Dibromochloromethane	50	51		1	101	70-130	06/29/2017 2117
1,2-Dibromoethane (EDB)	50	50		1	100	70-130	06/29/2017 2117
1,4-Dichlorobenzene	50	53		1	105	70-130	06/29/2017 2117
1,3-Dichlorobenzene	50	52		1	103	70-130	06/29/2017 2117
1,2-Dichlorobenzene	50	53		1	105	70-130	06/29/2017 2117
Dichlorodifluoromethane	50	43		1	86	60-140	06/29/2017 2117
1,2-Dichloroethane	50	44		1	88	70-130	06/29/2017 2117
1,1-Dichloroethane	50	42		1	84	70-130	06/29/2017 2117
trans-1,2-Dichloroethene	50	44		1	87	70-130	06/29/2017 2117
cis-1,2-Dichloroethene	50	43		1	86	70-130	06/29/2017 2117
1,1-Dichloroethene	50	41		1	83	70-130	06/29/2017 2117
1,2-Dichloropropane	50	48		1	95	70-130	06/29/2017 2117
trans-1,3-Dichloropropene	50	50		1	99	70-130	06/29/2017 2117
cis-1,3-Dichloropropene	50	50		1	99	70-130	06/29/2017 2117
Ethylbenzene	50	50		1	100	70-130	06/29/2017 2117
2-Hexanone	100	94		1	94	70-130	06/29/2017 2117
Isopropylbenzene	50	49		1	98	70-130	06/29/2017 2117
Methyl acetate	50	39		1	78	70-130	06/29/2017 2117
Methyl tertiary butyl ether (MTBE)	50	36		1	72	70-130	06/29/2017 2117
4-Methyl-2-pentanone	100	91		1	91	70-130	06/29/2017 2117
Methylcyclohexane	50	40		1	80	70-130	06/29/2017 2117
Methylene chloride	50	41		1	82	70-130	06/29/2017 2117
Styrene	50	51		1	102	70-130	06/29/2017 2117
1,1,2,2-Tetrachloroethane	50	53		1	105	70-130	06/29/2017 2117
Tetrachloroethene	50	51		1	101	70-130	06/29/2017 2117
Toluene	50	50		1	101	70-130	06/29/2017 2117
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	40		1	80	70-130	06/29/2017 2117
1,2,4-Trichlorobenzene	50	49		1	98	70-130	06/29/2017 2117
1,1,2-Trichloroethane	50	48		1	97	70-130	06/29/2017 2117
1,1,1-Trichloroethane	50	41		1	81	70-130	06/29/2017 2117

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45556-002

Matrix: Aqueous

Batch: 45556

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	47		1	93	70-130	06/29/2017 2117
Trichlorofluoromethane	50	42		1	85	70-130	06/29/2017 2117
Vinyl chloride	50	46		1	93	70-130	06/29/2017 2117
Xylenes (total)	100	99		1	99	70-130	06/29/2017 2117
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		101	70-130				
1,2-Dichloroethane-d4		89	70-130				
Toluene-d8		102	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-08

Page 1 of 1
Effective Date: 03/07/2017
Expiry Date: 03/07/2022

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: CLT/6/29/17 Lot #: SF29048

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 2. If custody seals were present, were they intact and unbroken?
pH strip ID: <u>NA</u> Cl strip ID: _____		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>19.6/19.6</u> / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>0</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/> 3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone <input checked="" type="checkbox"/> email / face-to-face (circle one).
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/> 16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 17. Were all DRO/metals/nutrient samples received at a pH of < 2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 19. Were all applicable NH3/TKN/cyanide/phenol/BNA (< 0.5mg/l.) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	22. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) <u>001</u> were received with bubbles >6 mm in diameter.		
Sample(s) <u>000</u> were received with TRC > 0.5 mg/L (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: _____		
SC Drinking Water Project Sample(s) pH verified to be < 2 by _____ Date: _____		
Sample(s) _____ were Not received at a pH of < 2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>NCT</u> Verified by: _____ Date: <u>6/29/17</u>		

Comments: _____

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare - Newberry Phase II RI**

Project Number: **60318383**

Lot Number: **SG05093**

Date Completed: **07/14/2017**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: SG05093

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: SG05093

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	Soil IDW	Solid	07/05/2017 1015	07/05/2017
002	FluidIDW	Aqueous	07/05/2017 1020	07/05/2017

(2 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: SG05093

Sample ID	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	Soil IDW	Solid	Methylene chloride	8260B	2.7	J	ug/kg	5
001	Soil IDW	Solid	Arsenic	6010D	1.1		mg/kg	7
001	Soil IDW	Solid	Barium	6010D	78		mg/kg	7
001	Soil IDW	Solid	Chromium	6010D	4.5		mg/kg	7
001	Soil IDW	Solid	Lead	6010D	9.4		mg/kg	7
002	FluidIDW	Aqueous	Acetone	8260B	12	J	ug/L	8
002	FluidIDW	Aqueous	Benzene	8260B	0.58	J	ug/L	8
002	FluidIDW	Aqueous	Bromodichloromethane	8260B	0.41	J	ug/L	8
002	FluidIDW	Aqueous	2-Butanone (MEK)	8260B	8.9	J	ug/L	8
002	FluidIDW	Aqueous	Carbon disulfide	8260B	0.48	J	ug/L	8
002	FluidIDW	Aqueous	Chloroform	8260B	18		ug/L	8
002	FluidIDW	Aqueous	Chloromethane (Methyl)	8260B	0.48	J	ug/L	8
002	FluidIDW	Aqueous	Arsenic	6010D	0.0080	J	mg/L	10
002	FluidIDW	Aqueous	Barium	6010D	0.39		mg/L	10
002	FluidIDW	Aqueous	Chromium	6010D	0.038		mg/L	10
002	FluidIDW	Aqueous	Lead	6010D	0.056		mg/L	10
002	FluidIDW	Aqueous	Silver	6010D	0.093		mg/L	10

(17 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG05093-001
Description: Soil IDW	Matrix: Solid
Date Sampled: 07/05/2017 1015	% Solids: 72.0 07/05/2017 2317
Date Received: 07/05/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/13/2017 1828	ECB		46463	6.02

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		23	4.6	ug/kg	1
Benzene	71-43-2	8260B	ND		5.8	2.3	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.8	2.3	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.8	2.3	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.8	2.3	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		12	4.6	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.8	2.3	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.8	2.3	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.8	2.3	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.8	2.3	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.8	2.3	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.8	2.3	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.8	2.3	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.8	2.3	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.8	2.3	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.8	2.3	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.8	2.3	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.8	2.3	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.8	2.3	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.8	2.3	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.8	2.3	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.8	2.3	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.8	2.3	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.8	2.3	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.8	2.3	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.8	2.3	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.8	2.3	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.8	2.3	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.8	2.3	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		12	4.6	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.8	2.3	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.8	2.3	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.8	2.3	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		12	4.6	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.8	2.3	ug/kg	1
Methylene chloride	75-09-2	8260B	2.7	J	5.8	2.3	ug/kg	1
Styrene	100-42-5	8260B	ND		5.8	2.3	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.8	2.3	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.8	2.3	ug/kg	1
Toluene	108-88-3	8260B	ND		5.8	2.3	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.8	2.3	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.8	2.3	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.8	2.3	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.8	2.3	ug/kg	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG05093-001
Description: Soil IDW	Matrix: Solid
Date Sampled: 07/05/2017 1015	% Solids: 72.0 07/05/2017 2317
Date Received: 07/05/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/13/2017 1828	ECB		46463	6.02

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.8	2.3	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.8	2.3	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.8	2.3	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		5.8	4.6	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		74	53-142
Bromofluorobenzene		97	47-138
Toluene-d8		91	68-124

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

RCRA Metals

Client: AECOM	Laboratory ID: SG05093-001
Description: Soil IDW	Matrix: Solid
Date Sampled: 07/05/2017 1015	% Solids: 72.0 07/05/2017 2317
Date Received: 07/05/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	07/10/2017 1927	CJZ	07/08/2017 1332	46154
1	7471B	7471B	1	07/10/2017 1210	COH	07/10/2017 1027	46204
2	3050B	6010D	2	07/11/2017 1329	CJZ	07/08/2017 1332	46154

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010D	1.1		0.79	0.26	mg/kg	1
Barium	7440-39-3	6010D	78		2.7	0.69	mg/kg	2
Cadmium	7440-43-9	6010D	ND		0.26	0.067	mg/kg	1
Chromium	7440-47-3	6010D	4.5		0.53	0.13	mg/kg	1
Lead	7439-92-1	6010D	9.4		0.53	0.24	mg/kg	1
Mercury	7439-97-6	7471B	ND		0.11	0.028	mg/kg	1
Selenium	7782-49-2	6010D	ND		1.1	0.43	mg/kg	1
Silver	7440-22-4	6010D	ND		0.53	0.13	mg/kg	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG05093-002
Description: FluidIDW	Matrix: Aqueous
Date Sampled: 07/05/2017 1020	
Date Received: 07/05/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/08/2017 1322	TML		46146

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	12	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	0.58	J	5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	0.41	J	5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	8.9	J	10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	0.48	J	5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	18		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	0.48	J	5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG05093-002
Description: FluidIDW	Matrix: Aqueous
Date Sampled: 07/05/2017 1020	
Date Received: 07/05/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/08/2017 1322	TML		46146

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		84	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		93	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

RCRA Metals

Client: AECOM	Laboratory ID: SG05093-002
Description: FluidIDW	Matrix: Aqueous
Date Sampled: 07/05/2017 1020	
Date Received: 07/05/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	07/07/2017 2253	SLS	07/07/2017 1912	46100
1	3005A	6010D	1	07/10/2017 2045	CJZ	07/08/2017 1302	46145

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Arsenic	7440-38-2	6010D	0.0080	J	0.015	0.0025	mg/L	1
Barium	7440-39-3	6010D	0.39		0.025	0.0031	mg/L	1
Cadmium	7440-43-9	6010D	ND		0.0050	0.00060	mg/L	1
Chromium	7440-47-3	6010D	0.038		0.010	0.0013	mg/L	1
Lead	7439-92-1	6010D	0.056		0.010	0.0047	mg/L	1
Mercury	7439-97-6	7470A	ND		0.00010	0.000091	mg/L	1
Selenium	7782-49-2	6010D	ND		0.020	0.0085	mg/L	1
Silver	7440-22-4	6010D	0.093		0.010	0.0021	mg/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ46146-001

Matrix: Aqueous

Batch: 46146

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	07/08/2017 1055
Benzene	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Bromodichloromethane	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Bromoform	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	07/08/2017 1055
2-Butanone (MEK)	ND		1	10	2.0	ug/L	07/08/2017 1055
Carbon disulfide	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Chlorobenzene	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Chloroethane	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Chloroform	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Cyclohexane	ND		1	5.0	0.40	ug/L	07/08/2017 1055
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Dibromochloromethane	ND		1	5.0	0.40	ug/L	07/08/2017 1055
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	07/08/2017 1055
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	07/08/2017 1055
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	07/08/2017 1055
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	07/08/2017 1055
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	07/08/2017 1055
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	07/08/2017 1055
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	07/08/2017 1055
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	07/08/2017 1055
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	07/08/2017 1055
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	07/08/2017 1055
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	07/08/2017 1055
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Ethylbenzene	ND		1	5.0	0.40	ug/L	07/08/2017 1055
2-Hexanone	ND		1	10	2.0	ug/L	07/08/2017 1055
Isopropylbenzene	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Methyl acetate	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	07/08/2017 1055
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	07/08/2017 1055
Methylcyclohexane	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Methylene chloride	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Styrene	ND		1	5.0	0.41	ug/L	07/08/2017 1055
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Tetrachloroethene	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Toluene	ND		1	5.0	0.40	ug/L	07/08/2017 1055
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	07/08/2017 1055
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	07/08/2017 1055
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	07/08/2017 1055
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	07/08/2017 1055

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ46146-001

Matrix: Aqueous

Batch: 46146

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Vinyl chloride	ND		1	2.0	0.40	ug/L	07/08/2017 1055
Xylenes (total)	ND		1	5.0	0.40	ug/L	07/08/2017 1055
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		101	70-130				
1,2-Dichloroethane-d4		85	70-130				
Toluene-d8		95	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ46146-002

Matrix: Aqueous

Batch: 46146

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	84		1	84	60-140	07/08/2017 0959
Benzene	50	52		1	104	70-130	07/08/2017 0959
Bromodichloromethane	50	51		1	103	70-130	07/08/2017 0959
Bromoform	50	60		1	120	70-130	07/08/2017 0959
Bromomethane (Methyl bromide)	50	59		1	117	70-130	07/08/2017 0959
2-Butanone (MEK)	100	90		1	90	70-130	07/08/2017 0959
Carbon disulfide	50	52		1	105	70-130	07/08/2017 0959
Carbon tetrachloride	50	52		1	103	70-130	07/08/2017 0959
Chlorobenzene	50	55		1	110	70-130	07/08/2017 0959
Chloroethane	50	52		1	105	70-130	07/08/2017 0959
Chloroform	50	48		1	97	70-130	07/08/2017 0959
Chloromethane (Methyl chloride)	50	49		1	97	60-140	07/08/2017 0959
Cyclohexane	50	50		1	100	70-130	07/08/2017 0959
1,2-Dibromo-3-chloropropane (DBCP)	50	42		1	83	70-130	07/08/2017 0959
Dibromochloromethane	50	57		1	115	70-130	07/08/2017 0959
1,2-Dibromoethane (EDB)	50	54		1	108	70-130	07/08/2017 0959
1,4-Dichlorobenzene	50	56		1	112	70-130	07/08/2017 0959
1,3-Dichlorobenzene	50	58		1	115	70-130	07/08/2017 0959
1,2-Dichlorobenzene	50	56		1	112	70-130	07/08/2017 0959
Dichlorodifluoromethane	50	53		1	105	60-140	07/08/2017 0959
1,2-Dichloroethane	50	49		1	97	70-130	07/08/2017 0959
1,1-Dichloroethane	50	48		1	97	70-130	07/08/2017 0959
cis-1,2-Dichloroethene	50	50		1	100	70-130	07/08/2017 0959
trans-1,2-Dichloroethene	50	51		1	102	70-130	07/08/2017 0959
1,1-Dichloroethene	50	50		1	100	70-130	07/08/2017 0959
1,2-Dichloropropane	50	51		1	102	70-130	07/08/2017 0959
trans-1,3-Dichloropropene	50	55		1	110	70-130	07/08/2017 0959
cis-1,3-Dichloropropene	50	56		1	113	70-130	07/08/2017 0959
Ethylbenzene	50	57		1	115	70-130	07/08/2017 0959
2-Hexanone	100	95		1	95	70-130	07/08/2017 0959
Isopropylbenzene	50	57		1	114	70-130	07/08/2017 0959
Methyl acetate	50	44		1	87	70-130	07/08/2017 0959
Methyl tertiary butyl ether (MTBE)	50	40		1	81	70-130	07/08/2017 0959
4-Methyl-2-pentanone	100	94		1	94	70-130	07/08/2017 0959
Methylcyclohexane	50	54		1	108	70-130	07/08/2017 0959
Methylene chloride	50	46		1	91	70-130	07/08/2017 0959
Styrene	50	57		1	114	70-130	07/08/2017 0959
1,1,2,2-Tetrachloroethane	50	53		1	106	70-130	07/08/2017 0959
Tetrachloroethene	50	59		1	117	70-130	07/08/2017 0959
Toluene	50	57		1	113	70-130	07/08/2017 0959
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	53		1	105	70-130	07/08/2017 0959
1,2,4-Trichlorobenzene	50	47		1	94	70-130	07/08/2017 0959
1,1,2-Trichloroethane	50	50		1	100	70-130	07/08/2017 0959
1,1,1-Trichloroethane	50	50		1	99	70-130	07/08/2017 0959

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ46146-002

Matrix: Aqueous

Batch: 46146

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	55		1	110	70-130	07/08/2017 0959
Trichlorofluoromethane	50	51		1	101	70-130	07/08/2017 0959
Vinyl chloride	50	48		1	96	70-130	07/08/2017 0959
Xylenes (total)	100	110		1	113	70-130	07/08/2017 0959
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		101	70-130				
1,2-Dichloroethane-d4		83	70-130				
Toluene-d8		94	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ46463-001

Matrix: Solid

Batch: 46463

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	4.0	ug/kg	07/13/2017 1230
Benzene	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Bromodichloromethane	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Bromoform	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Bromomethane (Methyl bromide)	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
2-Butanone (MEK)	ND		1	10	4.0	ug/kg	07/13/2017 1230
Carbon disulfide	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Carbon tetrachloride	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Chlorobenzene	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Chloroethane	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Chloroform	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Chloromethane (Methyl chloride)	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Cyclohexane	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Dibromochloromethane	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
1,2-Dibromoethane (EDB)	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
1,3-Dichlorobenzene	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
1,2-Dichlorobenzene	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
1,4-Dichlorobenzene	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Dichlorodifluoromethane	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
1,1-Dichloroethane	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
1,2-Dichloroethane	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
1,1-Dichloroethene	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
cis-1,2-Dichloroethene	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
trans-1,2-Dichloroethene	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
1,2-Dichloropropane	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
cis-1,3-Dichloropropene	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
trans-1,3-Dichloropropene	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Ethylbenzene	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
2-Hexanone	ND		1	10	4.0	ug/kg	07/13/2017 1230
Isopropylbenzene	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Methyl acetate	2.2	J	1	5.0	2.0	ug/kg	07/13/2017 1230
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
4-Methyl-2-pentanone	ND		1	10	4.0	ug/kg	07/13/2017 1230
Methylcyclohexane	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Methylene chloride	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Styrene	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
1,1,2,2-Tetrachloroethane	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Tetrachloroethene	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Toluene	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
1,2,4-Trichlorobenzene	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
1,1,2-Trichloroethane	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
1,1,1-Trichloroethane	ND		1	5.0	2.0	ug/kg	07/13/2017 1230

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ46463-001

Matrix: Solid

Batch: 46463

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Trichlorofluoromethane	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Vinyl chloride	ND		1	5.0	2.0	ug/kg	07/13/2017 1230
Xylenes (total)	ND		1	5.0	4.0	ug/kg	07/13/2017 1230
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		98	47-138				
1,2-Dichloroethane-d4		78	53-142				
Toluene-d8		90	68-124				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ46463-002

Matrix: Solid

Batch: 46463

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	94		1	94	70-130	07/13/2017 1155
Benzene	50	52		1	105	70-130	07/13/2017 1155
Bromodichloromethane	50	50		1	100	70-130	07/13/2017 1155
Bromoform	50	47		1	93	70-130	07/13/2017 1155
Bromomethane (Methyl bromide)	50	62		1	123	70-130	07/13/2017 1155
2-Butanone (MEK)	100	91		1	91	70-130	07/13/2017 1155
Carbon disulfide	50	56		1	111	70-130	07/13/2017 1155
Carbon tetrachloride	50	52		1	104	70-130	07/13/2017 1155
Chlorobenzene	50	51		1	102	70-130	07/13/2017 1155
Chloroethane	50	60		1	120	70-130	07/13/2017 1155
Chloroform	50	53		1	106	70-130	07/13/2017 1155
Chloromethane (Methyl chloride)	50	58		1	117	60-140	07/13/2017 1155
Cyclohexane	50	55		1	109	70-130	07/13/2017 1155
1,2-Dibromo-3-chloropropane (DBCP)	50	50		1	100	70-130	07/13/2017 1155
Dibromochloromethane	50	48		1	96	70-130	07/13/2017 1155
1,2-Dibromoethane (EDB)	50	50		1	99	70-130	07/13/2017 1155
1,3-Dichlorobenzene	50	52		1	103	70-130	07/13/2017 1155
1,2-Dichlorobenzene	50	52		1	103	70-130	07/13/2017 1155
1,4-Dichlorobenzene	50	53		1	106	70-130	07/13/2017 1155
Dichlorodifluoromethane	50	60		1	120	60-140	07/13/2017 1155
1,1-Dichloroethane	50	54		1	107	70-130	07/13/2017 1155
1,2-Dichloroethane	50	48		1	95	70-130	07/13/2017 1155
1,1-Dichloroethene	50	54		1	109	70-130	07/13/2017 1155
cis-1,2-Dichloroethene	50	54		1	107	70-130	07/13/2017 1155
trans-1,2-Dichloroethene	50	55		1	109	70-130	07/13/2017 1155
1,2-Dichloropropane	50	54		1	107	70-130	07/13/2017 1155
cis-1,3-Dichloropropene	50	54		1	109	70-130	07/13/2017 1155
trans-1,3-Dichloropropene	50	50		1	100	70-130	07/13/2017 1155
Ethylbenzene	50	54		1	107	70-130	07/13/2017 1155
2-Hexanone	100	95		1	95	70-130	07/13/2017 1155
Isopropylbenzene	50	55		1	109	70-130	07/13/2017 1155
Methyl acetate	50	50		1	101	70-130	07/13/2017 1155
Methyl tertiary butyl ether (MTBE)	50	45		1	90	70-130	07/13/2017 1155
4-Methyl-2-pentanone	100	97		1	97	70-130	07/13/2017 1155
Methylcyclohexane	50	57		1	114	70-130	07/13/2017 1155
Methylene chloride	50	49		1	99	70-130	07/13/2017 1155
Styrene	50	52		1	104	70-130	07/13/2017 1155
1,1,2,2-Tetrachloroethane	50	51		1	102	70-130	07/13/2017 1155
Tetrachloroethene	50	53		1	107	70-130	07/13/2017 1155
Toluene	50	53		1	105	70-130	07/13/2017 1155
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	56		1	113	70-130	07/13/2017 1155
1,2,4-Trichlorobenzene	50	53		1	107	70-130	07/13/2017 1155
1,1,2-Trichloroethane	50	47		1	93	70-130	07/13/2017 1155
1,1,1-Trichloroethane	50	54		1	108	70-130	07/13/2017 1155

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ46463-002

Matrix: Solid

Batch: 46463

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	52		1	105	70-130	07/13/2017 1155
Trichlorofluoromethane	50	55		1	109	70-130	07/13/2017 1155
Vinyl chloride	50	57		1	114	70-130	07/13/2017 1155
Xylenes (total)	100	100		1	105	70-130	07/13/2017 1155
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		97	47-138				
1,2-Dichloroethane-d4		76	53-142				
Toluene-d8		90	68-124				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

RCRA Metals - MB

Sample ID: SQ46145-001

Batch: 46145

Analytical Method: 6010D

Matrix: Aqueous

Prep Method: 3005A

Prep Date: 07/08/2017 1302

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Arsenic	ND		1	0.015	0.0025	mg/L	07/10/2017 1936
Barium	ND		1	0.025	0.0031	mg/L	07/10/2017 1936
Cadmium	ND		1	0.0050	0.00060	mg/L	07/10/2017 1936
Chromium	ND		1	0.010	0.0013	mg/L	07/10/2017 1936
Lead	ND		1	0.010	0.0047	mg/L	07/10/2017 1936
Selenium	ND		1	0.020	0.0085	mg/L	07/10/2017 1936
Silver	ND		1	0.010	0.0021	mg/L	07/10/2017 1936

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Page: 20 of 27

RCRA Metals - LCS

Sample ID: SQ46145-002

Matrix: Aqueous

Batch: 46145

Prep Method: 3005A

Analytical Method: 6010D

Prep Date: 07/08/2017 1302

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	0.40	0.41		1	103	80-120	07/10/2017 1941
Barium	2.0	2.0		1	100	80-120	07/10/2017 1941
Cadmium	0.40	0.41		1	101	80-120	07/10/2017 1941
Chromium	2.0	1.9		1	93	80-120	07/10/2017 1941
Lead	0.40	0.41		1	104	80-120	07/10/2017 1941
Selenium	0.40	0.43		1	107	80-120	07/10/2017 1941
Silver	0.40	0.40		1	101	80-120	07/10/2017 1941

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

RCRA Metals - MB

Sample ID: SQ46154-001

Batch: 46154

Analytical Method: 6010D

Matrix: Solid

Prep Method: 3050B

Prep Date: 07/08/2017 1332

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Arsenic	ND		1	0.75	0.25	mg/kg	07/10/2017 1221
Barium	ND		1	1.3	0.33	mg/kg	07/10/2017 1221
Cadmium	ND		1	0.25	0.063	mg/kg	07/10/2017 1221
Chromium	ND		1	0.50	0.13	mg/kg	07/10/2017 1221
Lead	ND		1	0.50	0.23	mg/kg	07/10/2017 1221
Selenium	ND		1	1.0	0.41	mg/kg	07/10/2017 1221
Silver	ND		1	0.50	0.13	mg/kg	07/10/2017 1221

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

RCRA Metals - LCS

Sample ID: SQ46154-002

Matrix: Solid

Batch: 46154

Prep Method: 3050B

Analytical Method: 6010D

Prep Date: 07/08/2017 1332

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	250	230		1	93	80-120	07/10/2017 1225
Barium	500	490		1	97	80-120	07/10/2017 1225
Cadmium	50	47		1	95	80-120	07/10/2017 1225
Chromium	250	260		1	105	80-120	07/10/2017 1225
Lead	250	240		1	97	80-120	07/10/2017 1225
Selenium	50	44		1	87	80-120	07/10/2017 1225
Silver	50	46		1	92	80-120	07/10/2017 1225

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

RCRA Metals - MB

Sample ID: SQ46100-001

Batch: 46100

Analytical Method: 7470A

Matrix: Aqueous

Prep Method: 7470A

Prep Date: 07/07/2017 1912

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Mercury	ND		1	0.00010	0.000091	mg/L	07/07/2017 2158

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Page: 24 of 27

RCRA Metals - LCS

Sample ID: SQ46100-002

Matrix: Aqueous

Batch: 46100

Prep Method: 7470A

Analytical Method: 7470A

Prep Date: 07/07/2017 1912

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0020	0.0020		1	101	80-120	07/07/2017 2201

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

RCRA Metals - MB

Sample ID: SQ46204-001

Batch: 46204

Analytical Method: 7471B

Matrix: Solid

Prep Method: 7471B

Prep Date: 07/10/2017 1027

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Mercury	ND		1	0.083	0.020	mg/kg	07/10/2017 1144

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Page: 26 of 27

RCRA Metals - LCS

Sample ID: SQ46204-002

Batch: 46204

Analytical Method: 7471B

Matrix: Solid

Prep Method: 7471B

Prep Date: 07/10/2017 1027

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.83	0.93		1	111	80-120	07/10/2017 1146

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.
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 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Chain of Custody Record

Number **74083**

Client AFCOM	Preparator to Contact Scott Ross	Telephone No. / E-mail (803) 254-4400 / Scott.Ross@AFCOM.com	Quota No. 1 of 1
Address 101 Research Dr.		Analysis (Attach list if more space is needed)	
State SC	Zip Code 29203	 SG05093 Remains / Cooler I.D.	
City Columbia	Project Name Shakespeare - Hamburg - Phase II RI		
Project No. 60534283	P.C. No.		
Sampler's Signature <i>[Signature]</i>		X SCOTT ROSS / JAMES BRIGHT X SCOTT ROSS / JAMES BRIGHT X SCOTT ROSS / JAMES BRIGHT X SCOTT ROSS / JAMES BRIGHT	
Project Name Shakespeare - Hamburg - Phase II RI		X TCR VOCs X TCR VOCs X TCR VOCs X TCR VOCs	
Project No. 60534283		X 24 hr. background X for SOW-3 (133')	

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	Method				Possible Hazard Identification				QC Requirements (Specialty)				
			Flow	Volume	Temp	Pressure	Explosive	Flammable	Toxic	Corrosive	Refrigerant	Other	Date	Time	
Soil IDW	7/5/17	1015	C	X	X	X	X	X	X	X	X	X	X	X	X
Fluid IDW	"	1020	C	X	X	X	X	X	X	X	X	X	X	X	X
SOW-3 (133')	7/5/17	1420	G	X	X	X	X	X	X	X	X	X	X	X	X

Turn Around Time Required (Prior lab approval required for expedited TAT.) <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)	Sample Disposal: <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Destroyed by Lab <input type="checkbox"/> Hazardous <input type="checkbox"/> Flammable <input type="checkbox"/> Toxic <input type="checkbox"/> Corrosive <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown
1. Requisitioned by <i>[Signature]</i> Date: 7/5/17 Time: 1536	1. Received by <i>[Signature]</i> Date: _____ Time: _____
2. Requisitioned by _____ Date: _____ Time: _____	2. Received by _____ Date: _____ Time: _____
3. Requisitioned by _____ Date: _____ Time: _____	3. Received by _____ Date: _____ Time: _____
4. Requisitioned by _____ Date: _____ Time: _____	4. Laboratory received by <i>[Signature]</i> Date: 7/5/17 Time: 1536

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare - Newberry Phase II RI**

Project Number: **60534283**

Lot Number: **SG05094**

Date Completed: **Preliminary**



Nisreen Saikaly
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: SG05094

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: SG05094

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	SDW-3 (133')	Aqueous	07/05/2017 1420	07/05/2017

(1 sample)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: SG05094

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	SDW-3 (133')	Aqueous	Acetone	8260B	5.5	J	ug/L	5
001	SDW-3 (133')	Aqueous	Bromodichloromethane	8260B	1.3	J	ug/L	5
001	SDW-3 (133')	Aqueous	Chloroform	8260B	5.6		ug/L	5

(3 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG05094-001
Description: SDW-3 (133')	Matrix: Aqueous
Date Sampled: 07/05/2017 1420	
Date Received: 07/05/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/06/2017 1326	TML		45987

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	5.5	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	1.3	J	5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	5.6		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG05094-001
Description: SDW-3 (133')	Matrix: Aqueous
Date Sampled: 07/05/2017 1420	
Date Received: 07/05/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/06/2017 1326	TML		45987

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		102	70-130
Toluene-d8		95	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

PRELIMINARY

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45987-001

Matrix: Aqueous

Batch: 45987

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	07/06/2017 1246
Benzene	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Bromodichloromethane	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Bromoform	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	07/06/2017 1246
2-Butanone (MEK)	ND		1	10	2.0	ug/L	07/06/2017 1246
Carbon disulfide	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Chlorobenzene	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Chloroethane	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Chloroform	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Cyclohexane	ND		1	5.0	0.40	ug/L	07/06/2017 1246
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Dibromochloromethane	ND		1	5.0	0.40	ug/L	07/06/2017 1246
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	07/06/2017 1246
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	07/06/2017 1246
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	07/06/2017 1246
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	07/06/2017 1246
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	07/06/2017 1246
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	07/06/2017 1246
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	07/06/2017 1246
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	07/06/2017 1246
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	07/06/2017 1246
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	07/06/2017 1246
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	07/06/2017 1246
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Ethylbenzene	ND		1	5.0	0.40	ug/L	07/06/2017 1246
2-Hexanone	ND		1	10	2.0	ug/L	07/06/2017 1246
Isopropylbenzene	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Methyl acetate	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	07/06/2017 1246
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	07/06/2017 1246
Methylcyclohexane	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Methylene chloride	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Styrene	ND		1	5.0	0.41	ug/L	07/06/2017 1246
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Tetrachloroethene	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Toluene	ND		1	5.0	0.40	ug/L	07/06/2017 1246
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	07/06/2017 1246
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	07/06/2017 1246
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	07/06/2017 1246
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	07/06/2017 1246

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ45987-001

Matrix: Aqueous

Batch: 45987

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Vinyl chloride	ND		1	2.0	0.40	ug/L	07/06/2017 1246
Xylenes (total)	ND		1	5.0	0.40	ug/L	07/06/2017 1246
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		101	70-130				
1,2-Dichloroethane-d4		88	70-130				
Toluene-d8		94	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45987-002

Matrix: Aqueous

Batch: 45987

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	86		1	86	60-140	07/06/2017 1146
Benzene	50	48		1	95	70-130	07/06/2017 1146
Bromodichloromethane	50	48		1	95	70-130	07/06/2017 1146
Bromoform	50	56		1	111	70-130	07/06/2017 1146
Bromomethane (Methyl bromide)	50	53		1	107	70-130	07/06/2017 1146
2-Butanone (MEK)	100	86		1	86	70-130	07/06/2017 1146
Carbon disulfide	50	43		1	86	70-130	07/06/2017 1146
Carbon tetrachloride	50	47		1	94	70-130	07/06/2017 1146
Chlorobenzene	50	52		1	103	70-130	07/06/2017 1146
Chloroethane	50	48		1	96	70-130	07/06/2017 1146
Chloroform	50	45		1	89	70-130	07/06/2017 1146
Chloromethane (Methyl chloride)	50	44		1	88	60-140	07/06/2017 1146
Cyclohexane	50	43		1	86	70-130	07/06/2017 1146
1,2-Dibromo-3-chloropropane (DBCP)	50	50		1	101	70-130	07/06/2017 1146
Dibromochloromethane	50	53		1	106	70-130	07/06/2017 1146
1,2-Dibromoethane (EDB)	50	50		1	100	70-130	07/06/2017 1146
1,4-Dichlorobenzene	50	52		1	103	70-130	07/06/2017 1146
1,3-Dichlorobenzene	50	52		1	103	70-130	07/06/2017 1146
1,2-Dichlorobenzene	50	52		1	104	70-130	07/06/2017 1146
Dichlorodifluoromethane	50	51		1	102	60-140	07/06/2017 1146
1,2-Dichloroethane	50	45		1	90	70-130	07/06/2017 1146
1,1-Dichloroethane	50	45		1	89	70-130	07/06/2017 1146
trans-1,2-Dichloroethene	50	46		1	91	70-130	07/06/2017 1146
cis-1,2-Dichloroethene	50	45		1	90	70-130	07/06/2017 1146
1,1-Dichloroethene	50	44		1	87	70-130	07/06/2017 1146
1,2-Dichloropropane	50	46		1	93	70-130	07/06/2017 1146
trans-1,3-Dichloropropene	50	52		1	103	70-130	07/06/2017 1146
cis-1,3-Dichloropropene	50	52		1	104	70-130	07/06/2017 1146
Ethylbenzene	50	53		1	105	70-130	07/06/2017 1146
2-Hexanone	100	93		1	93	70-130	07/06/2017 1146
Isopropylbenzene	50	52		1	104	70-130	07/06/2017 1146
Methyl acetate	50	43		1	86	70-130	07/06/2017 1146
Methyl tertiary butyl ether (MTBE)	50	37		1	73	70-130	07/06/2017 1146
4-Methyl-2-pentanone	100	88		1	88	70-130	07/06/2017 1146
Methylcyclohexane	50	48		1	97	70-130	07/06/2017 1146
Methylene chloride	50	41		1	82	70-130	07/06/2017 1146
Styrene	50	53		1	106	70-130	07/06/2017 1146
1,1,2,2-Tetrachloroethane	50	50		1	100	70-130	07/06/2017 1146
Tetrachloroethene	50	53		1	105	70-130	07/06/2017 1146
Toluene	50	52		1	104	70-130	07/06/2017 1146
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	46		1	92	70-130	07/06/2017 1146
1,2,4-Trichlorobenzene	50	53		1	106	70-130	07/06/2017 1146
1,1,2-Trichloroethane	50	47		1	94	70-130	07/06/2017 1146
1,1,1-Trichloroethane	50	45		1	90	70-130	07/06/2017 1146

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ45987-002

Matrix: Aqueous

Batch: 45987

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	49		1	99	70-130	07/06/2017 1146
Trichlorofluoromethane	50	47		1	94	70-130	07/06/2017 1146
Vinyl chloride	50	45		1	91	70-130	07/06/2017 1146
Xylenes (total)	100	100		1	104	70-130	07/06/2017 1146
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		102	70-130				
1,2-Dichloroethane-d4		86	70-130				
Toluene-d8		97	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-08

Page 1 of 1
Effective Date: 03/09/2017
Expiry Date: 03/07/2022

Sample Receipt Checklist (SRC)

Client: AECOM

Cooler Inspected by/date: ELO 7-5-17 Lot #: SC05094

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
2. If custody seals were present, were they intact and unbroken?		
pH strip ID: _____ CI strip ID: _____		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u> </u> / <u> </u> / <u> </u> °C <u>8.4</u> / <u>8.4</u> °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input type="checkbox"/> Wet Ice <input checked="" type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone <u> </u> / face-to-face (circle one).		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
4. Is the commercial courier's packing slip attached to this form?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
5. Were proper custody procedures (relinquished/received) followed?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
6. Were sample IDs listed on the COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
7. Were sample IDs listed on all sample containers?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
8. Was collection date & time listed on the COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
9. Was collection date & time listed on all sample containers?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
10. Did all container label information (ID, date, time) agree with the COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
11. Were tests to be performed listed on the COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
13. Was adequate sample volume available?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
15. Were any samples containers missing/excess (circle one) samples Not listed on COC?		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
16. Were bubbles present >"pea-size" (¼") or 6mm in diameter) in any VOA vials?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
17. Were all DRO/metals/nutrient samples received at a pH of < 2?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
19. Were all applicable NH3/IKN/cyanide/phenol/BNA (< 0.5mg/L) samples free of residual chlorine?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
20. Were collection temperatures documented on the COC for NC samples?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
22. Was the quote number used taken from the container label?		
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H2SO4, HNO3, HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Samples(s) _____ were received with TRC > 0.5 mg/l. (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na2S2O3) with Shealy ID: _____		
SC Drinking Water Project Sample(s) pH verified to be < 2 by _____ Date: _____		
Sample(s) _____ were Not received at a pH of < 2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>Evan Coll</u> Verified by: _____ Date: <u>7-5-17</u>		

Comments: _____

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare RI**

Project Number: **60534283**

Lot Number: **SG06069**

Date Completed: **07/10/2017**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: SG06069

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: SG06069

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-12D (71-81H)	Aqueous	07/06/2017 1120	07/06/2017

(1 sample)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: SG06069

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-12D (71-81H)	Aqueous	Acetone	8260B	2.5	J	ug/L	5
001	MW-12D (71-81H)	Aqueous	Bromodichloromethane	8260B	3.8	J	ug/L	5
001	MW-12D (71-81H)	Aqueous	Chloroform	8260B	16		ug/L	5
001	MW-12D (71-81H)	Aqueous	Dibromochloromethane	8260B	0.87	J	ug/L	5
001	MW-12D (71-81H)	Aqueous	cis-1,2-Dichloroethene	8260B	2.1	J	ug/L	5
001	MW-12D (71-81H)	Aqueous	Trichloroethene	8260B	7.8		ug/L	6

(6 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG06069-001
Description: MW-12D (71-81H)	Matrix: Aqueous
Date Sampled: 07/06/2017 1120	
Date Received: 07/06/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/07/2017 1206	BWS		46083

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	2.5	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	3.8	J	5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	16		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	0.87	J	5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	2.1	J	5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG06069-001
Description: MW-12D (71-81H)	Matrix: Aqueous
Date Sampled: 07/06/2017 1120	
Date Received: 07/06/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/07/2017 1206	BWS		46083

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Trichloroethene	79-01-6	8260B	7.8		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		86	70-130
Bromofluorobenzene		100	70-130
Toluene-d8		94	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ46083-001

Matrix: Aqueous

Batch: 46083

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	07/07/2017 1041
Benzene	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Bromodichloromethane	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Bromoform	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	07/07/2017 1041
2-Butanone (MEK)	ND		1	10	2.0	ug/L	07/07/2017 1041
Carbon disulfide	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Chlorobenzene	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Chloroethane	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Chloroform	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Cyclohexane	ND		1	5.0	0.40	ug/L	07/07/2017 1041
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Dibromochloromethane	ND		1	5.0	0.40	ug/L	07/07/2017 1041
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	07/07/2017 1041
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	07/07/2017 1041
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	07/07/2017 1041
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	07/07/2017 1041
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	07/07/2017 1041
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	07/07/2017 1041
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	07/07/2017 1041
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	07/07/2017 1041
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	07/07/2017 1041
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	07/07/2017 1041
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	07/07/2017 1041
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Ethylbenzene	ND		1	5.0	0.40	ug/L	07/07/2017 1041
2-Hexanone	ND		1	10	2.0	ug/L	07/07/2017 1041
Isopropylbenzene	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Methyl acetate	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	07/07/2017 1041
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	07/07/2017 1041
Methylcyclohexane	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Methylene chloride	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Styrene	ND		1	5.0	0.41	ug/L	07/07/2017 1041
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Tetrachloroethene	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Toluene	ND		1	5.0	0.40	ug/L	07/07/2017 1041
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	07/07/2017 1041
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	07/07/2017 1041
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	07/07/2017 1041
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	07/07/2017 1041

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ46083-001

Matrix: Aqueous

Batch: 46083

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Vinyl chloride	ND		1	2.0	0.40	ug/L	07/07/2017 1041
Xylenes (total)	ND		1	5.0	0.40	ug/L	07/07/2017 1041
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		112	70-130				
1,2-Dichloroethane-d4		94	70-130				
Toluene-d8		106	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ46083-002

Matrix: Aqueous

Batch: 46083

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	95		1	95	60-140	07/07/2017 0941
Benzene	50	49		1	99	70-130	07/07/2017 0941
Bromodichloromethane	50	50		1	100	70-130	07/07/2017 0941
Bromoform	50	60		1	120	70-130	07/07/2017 0941
Bromomethane (Methyl bromide)	50	55		1	109	70-130	07/07/2017 0941
2-Butanone (MEK)	100	98		1	98	70-130	07/07/2017 0941
Carbon disulfide	50	47		1	93	70-130	07/07/2017 0941
Carbon tetrachloride	50	47		1	95	70-130	07/07/2017 0941
Chlorobenzene	50	54		1	107	70-130	07/07/2017 0941
Chloroethane	50	49		1	98	70-130	07/07/2017 0941
Chloroform	50	45		1	91	70-130	07/07/2017 0941
Chloromethane (Methyl chloride)	50	44		1	88	60-140	07/07/2017 0941
Cyclohexane	50	46		1	92	70-130	07/07/2017 0941
1,2-Dibromo-3-chloropropane (DBCP)	50	53		1	106	70-130	07/07/2017 0941
Dibromochloromethane	50	56		1	112	70-130	07/07/2017 0941
1,2-Dibromoethane (EDB)	50	54		1	107	70-130	07/07/2017 0941
1,4-Dichlorobenzene	50	55		1	109	70-130	07/07/2017 0941
1,3-Dichlorobenzene	50	55		1	110	70-130	07/07/2017 0941
1,2-Dichlorobenzene	50	56		1	112	70-130	07/07/2017 0941
Dichlorodifluoromethane	50	50		1	100	60-140	07/07/2017 0941
1,2-Dichloroethane	50	47		1	95	70-130	07/07/2017 0941
1,1-Dichloroethane	50	45		1	90	70-130	07/07/2017 0941
trans-1,2-Dichloroethene	50	47		1	93	70-130	07/07/2017 0941
cis-1,2-Dichloroethene	50	47		1	93	70-130	07/07/2017 0941
1,1-Dichloroethene	50	45		1	90	70-130	07/07/2017 0941
1,2-Dichloropropane	50	49		1	98	70-130	07/07/2017 0941
trans-1,3-Dichloropropene	50	55		1	111	70-130	07/07/2017 0941
cis-1,3-Dichloropropene	50	56		1	111	70-130	07/07/2017 0941
Ethylbenzene	50	55		1	109	70-130	07/07/2017 0941
2-Hexanone	100	100		1	102	70-130	07/07/2017 0941
Isopropylbenzene	50	55		1	111	70-130	07/07/2017 0941
Methyl acetate	50	43		1	86	70-130	07/07/2017 0941
Methyl tertiary butyl ether (MTBE)	50	39		1	79	70-130	07/07/2017 0941
4-Methyl-2-pentanone	100	96		1	96	70-130	07/07/2017 0941
Methylcyclohexane	50	50		1	101	70-130	07/07/2017 0941
Methylene chloride	50	43		1	86	70-130	07/07/2017 0941
Styrene	50	56		1	111	70-130	07/07/2017 0941
1,1,2,2-Tetrachloroethane	50	53		1	105	70-130	07/07/2017 0941
Tetrachloroethene	50	55		1	110	70-130	07/07/2017 0941
Toluene	50	53		1	107	70-130	07/07/2017 0941
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	48		1	96	70-130	07/07/2017 0941
1,2,4-Trichlorobenzene	50	53		1	107	70-130	07/07/2017 0941
1,1,2-Trichloroethane	50	50		1	101	70-130	07/07/2017 0941
1,1,1-Trichloroethane	50	46		1	92	70-130	07/07/2017 0941

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ46083-002

Matrix: Aqueous

Batch: 46083

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	51		1	101	70-130	07/07/2017 0941
Trichlorofluoromethane	50	52		1	103	70-130	07/07/2017 0941
Vinyl chloride	50	46		1	92	70-130	07/07/2017 0941
Xylenes (total)	100	110		1	108	70-130	07/07/2017 0941
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		103	70-130				
1,2-Dichloroethane-d4		83	70-130				
Toluene-d8		97	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

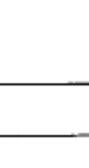
**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 70693

SHEALY Chain of Custody Record

Client AELcom	Report to Contact Scott Ross	Telephone No. / E-mail 803-754-4400	Quote No.
Address 101 Research Dr.	Sampler's Signature <i>Scott Ross</i>	Analysis (Attach list if more space is needed)	
City Columbia	Printed Name Scott Ross	Page 1 of 1	
State SC	Project Name Shakespeare RI	 SG06069 <small>REGISTERED LABORATORY</small>	
Zip Code 29203	P.O. No.		
Project No. 60534283	Sample ID / Description MPO-12D (71-8112)	 SG06069 <small>REGISTERED LABORATORY</small>	
Date 07/04/05	Time 1120		
(Containers for each sample may be cartoned on one (yes) _____ no _____ yes _____ no _____			
Turn Around Time Required (Prior lab approval required for expedited TAT.) <input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush (Specify) 24 Hours		Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	
Sample Disposal: <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab		OC Requirements (Specify)	
1. Relinquished by Elliot H. Smith Date 07/04/05 Time 1705		Date _____ Time _____	
2. Relinquished by _____ Date _____ Time _____		Date _____ Time _____	
3. Relinquished by _____ Date _____ Time _____		Date _____ Time _____	
4. Relinquished by _____ Date _____ Time _____		Date 7-6-17 Time 1705	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.			
LAB USE ONLY Received on ice (Check) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Receipt Temp. 28 °C	

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number ME0018C-08

Page 1 of 1
Effective Date: 03/07/2017
Expiry Date: 03/07/2022

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: CLT/7/16/17 Lot #: SG-010069

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other _____		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
pH strip ID: <u>N/A</u> Cl strip ID: _____		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>0180.8</u> °C / / °C / / °C / / °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>0</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA (< 0.5mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	22. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.5 mg/L. (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: _____		
SC Drinking Water Project Sample(s) pH verified to be < 2 by _____ Date: _____		
Sample(s) _____ were Not received at a pH of < 2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>CLT</u> Verified by: _____ Date: <u>7/16/17</u>		

Comments: _____

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: **Shakespeare Newberry Phase II RI**

Project Number: **60534283**

Lot Number: **SG11048**

Date Completed: **07/13/2017**



Nisreen Saikaly
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative

AECOM

Lot Number: SG11048

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: SG11048

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-17D (38'-44')	Aqueous	07/11/2017 1420	07/11/2017

(1 sample)

SHEALY ENVIRONMENTAL SERVICES, INC.

Executive Summary

AECOM

Lot Number: SG11048

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-17D (38'-44')	Aqueous	Acetone	8260B	78		ug/L	5
001	MW-17D (38'-44')	Aqueous	Bromodichloromethane	8260B	7.9		ug/L	5
001	MW-17D (38'-44')	Aqueous	2-Butanone (MEK)	8260B	2.5	J	ug/L	5
001	MW-17D (38'-44')	Aqueous	Carbon disulfide	8260B	0.91	BJ	ug/L	5
001	MW-17D (38'-44')	Aqueous	Chloroform	8260B	42		ug/L	5
001	MW-17D (38'-44')	Aqueous	Dibromochloromethane	8260B	1.7	J	ug/L	5
001	MW-17D (38'-44')	Aqueous	Ethylbenzene	8260B	1.6	J	ug/L	6

(7 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG11048-001
Description: MW-17D (38'-44')	Matrix: Aqueous
Date Sampled: 07/11/2017 1420	
Date Received: 07/11/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/12/2017 1131	TML		46436
2	5030B	8260B	1	07/13/2017 0145	ECP		46510

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	78		20	2.0	ug/L	2
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	7.9		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	2.5	J	10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	0.91	BJ	5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	42		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	1.7	J	5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	1.6	J	5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG11048-001
Description: MW-17D (38'-44')	Matrix: Aqueous
Date Sampled: 07/11/2017 1420	
Date Received: 07/11/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/12/2017 1131	TML		46436
2	5030B	8260B	1	07/13/2017 0145	ECP		46510

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		109	70-130		97	70-130
Bromofluorobenzene		109	70-130		97	70-130
Toluene-d8		117	70-130		101	70-130

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time
 ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ46436-001

Matrix: Aqueous

Batch: 46436

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Bromodichloromethane	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Bromoform	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	07/12/2017 1100
2-Butanone (MEK)	ND		1	10	2.0	ug/L	07/12/2017 1100
Carbon disulfide	0.60	J	1	5.0	0.40	ug/L	07/12/2017 1100
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Chlorobenzene	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Chloroethane	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Chloroform	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Cyclohexane	ND		1	5.0	0.40	ug/L	07/12/2017 1100
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Dibromochloromethane	ND		1	5.0	0.40	ug/L	07/12/2017 1100
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	07/12/2017 1100
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	07/12/2017 1100
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	07/12/2017 1100
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	07/12/2017 1100
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	07/12/2017 1100
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	07/12/2017 1100
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	07/12/2017 1100
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	07/12/2017 1100
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	07/12/2017 1100
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	07/12/2017 1100
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	07/12/2017 1100
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Ethylbenzene	ND		1	5.0	0.40	ug/L	07/12/2017 1100
2-Hexanone	ND		1	10	2.0	ug/L	07/12/2017 1100
Isopropylbenzene	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Methyl acetate	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	07/12/2017 1100
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	07/12/2017 1100
Methylcyclohexane	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Methylene chloride	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Styrene	ND		1	5.0	0.41	ug/L	07/12/2017 1100
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Tetrachloroethene	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Toluene	ND		1	5.0	0.40	ug/L	07/12/2017 1100
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	07/12/2017 1100
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	07/12/2017 1100
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	07/12/2017 1100
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Trichloroethene	ND		1	5.0	0.40	ug/L	07/12/2017 1100

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ46436-001

Matrix: Aqueous

Batch: 46436

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Vinyl chloride	ND		1	2.0	0.40	ug/L	07/12/2017 1100
Xylenes (total)	ND		1	5.0	0.40	ug/L	07/12/2017 1100
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		106	70-130				
1,2-Dichloroethane-d4		109	70-130				
Toluene-d8		115	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ46436-002

Matrix: Aqueous

Batch: 46436

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	48		1	96	70-130	07/12/2017 1010
Bromodichloromethane	50	50		1	101	70-130	07/12/2017 1010
Bromoform	50	52		1	104	70-130	07/12/2017 1010
Bromomethane (Methyl bromide)	50	61		1	123	70-130	07/12/2017 1010
2-Butanone (MEK)	100	95		1	95	70-130	07/12/2017 1010
Carbon disulfide	50	44		1	88	70-130	07/12/2017 1010
Carbon tetrachloride	50	49		1	97	70-130	07/12/2017 1010
Chlorobenzene	50	49		1	97	70-130	07/12/2017 1010
Chloroethane	50	57		1	114	70-130	07/12/2017 1010
Chloroform	50	48		1	95	70-130	07/12/2017 1010
Chloromethane (Methyl chloride)	50	60		1	119	60-140	07/12/2017 1010
Cyclohexane	50	57		1	113	70-130	07/12/2017 1010
1,2-Dibromo-3-chloropropane (DBCP)	50	56		1	112	70-130	07/12/2017 1010
Dibromochloromethane	50	55		1	110	70-130	07/12/2017 1010
1,2-Dibromoethane (EDB)	50	49		1	98	70-130	07/12/2017 1010
1,4-Dichlorobenzene	50	48		1	97	70-130	07/12/2017 1010
1,3-Dichlorobenzene	50	49		1	97	70-130	07/12/2017 1010
1,2-Dichlorobenzene	50	49		1	98	70-130	07/12/2017 1010
Dichlorodifluoromethane	50	60		1	120	60-140	07/12/2017 1010
1,2-Dichloroethane	50	46		1	92	70-130	07/12/2017 1010
1,1-Dichloroethane	50	48		1	96	70-130	07/12/2017 1010
trans-1,2-Dichloroethene	50	47		1	93	70-130	07/12/2017 1010
cis-1,2-Dichloroethene	50	47		1	95	70-130	07/12/2017 1010
1,1-Dichloroethene	50	47		1	93	70-130	07/12/2017 1010
1,2-Dichloropropane	50	51		1	101	70-130	07/12/2017 1010
trans-1,3-Dichloropropene	50	52		1	104	70-130	07/12/2017 1010
cis-1,3-Dichloropropene	50	55		1	109	70-130	07/12/2017 1010
Ethylbenzene	50	49		1	97	70-130	07/12/2017 1010
2-Hexanone	100	79		1	79	70-130	07/12/2017 1010
Isopropylbenzene	50	49		1	98	70-130	07/12/2017 1010
Methyl acetate	50	49		1	98	70-130	07/12/2017 1010
Methyl tertiary butyl ether (MTBE)	50	40		1	81	70-130	07/12/2017 1010
4-Methyl-2-pentanone	100	98		1	98	70-130	07/12/2017 1010
Methylcyclohexane	50	47		1	94	70-130	07/12/2017 1010
Methylene chloride	50	44		1	89	70-130	07/12/2017 1010
Styrene	50	50		1	101	70-130	07/12/2017 1010
1,1,2,2-Tetrachloroethane	50	49		1	98	70-130	07/12/2017 1010
Tetrachloroethene	50	50		1	100	70-130	07/12/2017 1010
Toluene	50	49		1	97	70-130	07/12/2017 1010
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	47		1	93	70-130	07/12/2017 1010
1,2,4-Trichlorobenzene	50	48		1	97	70-130	07/12/2017 1010
1,1,2-Trichloroethane	50	47		1	93	70-130	07/12/2017 1010
1,1,1-Trichloroethane	50	50		1	99	70-130	07/12/2017 1010
Trichloroethene	50	48		1	97	70-130	07/12/2017 1010

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ46436-002

Matrix: Aqueous

Batch: 46436

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichlorofluoromethane	50	49		1	97	70-130	07/12/2017 1010
Vinyl chloride	50	54		1	109	70-130	07/12/2017 1010
Xylenes (total)	100	97		1	97	70-130	07/12/2017 1010
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		102			70-130		
1,2-Dichloroethane-d4		103			70-130		
Toluene-d8		110			70-130		

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ46510-001

Matrix: Aqueous

Batch: 46510

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	07/12/2017 2150
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		102	70-130				
1,2-Dichloroethane-d4		99	70-130				
Toluene-d8		103	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ46510-002

Matrix: Aqueous

Batch: 46510

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	90		1	90	60-140	07/12/2017 2050
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		100	70-130				
1,2-Dichloroethane-d4		97	70-130				
Toluene-d8		104	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-08

Page 1 of 1
Effective Date: 03/07/2017
Expiry Date: 03/07/2022

Sample Receipt Checklist (SRC)

Client: AECOM

Cooler Inspected by/date: SAE 1-7-17 Lot #: 5611048

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?
pH strip ID: _____ CI strip ID: _____		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>16.0/16.0</u> °C <u>1</u> / <u>1</u> °C <u>1</u> / <u>1</u> °C <u>1</u> / <u>1</u> °C		
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
Yes <input type="checkbox"/>	No <input type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA (< 0.5mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	22. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with IRC > 0.5 mg/L (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: _____		
SC Drinking Water Project Sample(s) pH verified to be < 2 by _____ Date: _____		
Sample(s) _____ were Not received at a pH of < 2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>SAE</u> Verified by: _____ Date: <u>7/1/17</u>		

Comments: _____

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: Shakespeare - Newberry

Project Number: 60534253

Lot Number: **SG26040**

Date Completed: 08/01/2017

N. Saikaly

08/04/2017 10:08 AM

Approved and released by:
Project Manager: Nisreen Saikaly



**LABORATORY
ACCREDITATION
BUREAU** a division of A-S-B
ACCREDITED ISO/IEC 17025

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106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative AECOM Lot Number: SG26040

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: SG26040

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-12D	Aqueous	07/24/2017 1700	07/26/2017
002	MW-17D	Aqueous	07/25/2017 1255	07/26/2017
003	SDW-3	Aqueous	07/25/2017 1557	07/26/2017
004	Trip Blank	Aqueous	07/26/2017 1130	07/26/2017

(4 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Detection Summary

AECOM

Lot Number: SG26040

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-12D	Aqueous	Acetone	8260B	2.2	J	ug/L	5
001	MW-12D	Aqueous	Chloroform	8260B	0.61	J	ug/L	5
001	MW-12D	Aqueous	cis-1,2-Dichloroethene	8260B	4.2	J	ug/L	5
001	MW-12D	Aqueous	Trichloroethene	8260B	12		ug/L	6
002	MW-17D	Aqueous	Chloroform	8260B	2.0	J	ug/L	7
004	Trip Blank	Aqueous	Acetone	8260B	2.5	J	ug/L	11

(6 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG26040-001
Description: MW-12D	Matrix: Aqueous
Date Sampled: 07/24/2017 1700	
Date Received: 07/26/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/28/2017 0058	ECP		47717
2	5030B	8260B	1	07/31/2017 1215	TML		47952

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	2.2	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	0.61	J	5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	4.2	J	5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG26040-001
Description: MW-12D	Matrix: Aqueous
Date Sampled: 07/24/2017 1700	
Date Received: 07/26/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/28/2017 0058	ECP		47717
2	5030B	8260B	1	07/31/2017 1215	TML		47952

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	12		5.0	0.40	ug/L	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		107	70-130		119	70-130
Bromofluorobenzene		107	70-130		117	70-130
Toluene-d8		111	70-130		118	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG26040-002
Description: MW-17D	Matrix: Aqueous
Date Sampled: 07/25/2017 1255	
Date Received: 07/26/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/28/2017 0121	ECP		47717

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	2.0	J	5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG26040-002
Description: MW-17D	Matrix: Aqueous
Date Sampled: 07/25/2017 1255	
Date Received: 07/26/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/28/2017 0121	ECP		47717

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		107	70-130
Bromofluorobenzene		110	70-130
Toluene-d8		114	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG26040-003
Description: SDW-3	Matrix: Aqueous
Date Sampled: 07/25/2017 1557	
Date Received: 07/26/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/28/2017 0145	ECP		47717

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG26040-003
Description: SDW-3	Matrix: Aqueous
Date Sampled: 07/25/2017 1557	
Date Received: 07/26/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/28/2017 0145	ECP		47717

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		108	70-130
Bromofluorobenzene		110	70-130
Toluene-d8		114	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG26040-004
Description: Trip Blank	Matrix: Aqueous
Date Sampled: 07/26/2017 1130	
Date Received: 07/26/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/27/2017 2127	ECP		47717

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	2.5	J	20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG26040-004
Description: Trip Blank	Matrix: Aqueous
Date Sampled: 07/26/2017 1130	
Date Received: 07/26/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/27/2017 2127	ECP		47717

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		106	70-130
Bromofluorobenzene		109	70-130
Toluene-d8		112	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ47717-001

Matrix: Aqueous

Batch: 47717

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	07/27/2017 1830
Benzene	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Bromodichloromethane	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Bromoform	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	07/27/2017 1830
2-Butanone (MEK)	ND		1	10	2.0	ug/L	07/27/2017 1830
Carbon disulfide	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Chlorobenzene	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Chloroethane	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Chloroform	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Cyclohexane	ND		1	5.0	0.40	ug/L	07/27/2017 1830
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Dibromochloromethane	ND		1	5.0	0.40	ug/L	07/27/2017 1830
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	07/27/2017 1830
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	07/27/2017 1830
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	07/27/2017 1830
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	07/27/2017 1830
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	07/27/2017 1830
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	07/27/2017 1830
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	07/27/2017 1830
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	07/27/2017 1830
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	07/27/2017 1830
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	07/27/2017 1830
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	07/27/2017 1830
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Ethylbenzene	ND		1	5.0	0.40	ug/L	07/27/2017 1830
2-Hexanone	ND		1	10	2.0	ug/L	07/27/2017 1830
Isopropylbenzene	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Methyl acetate	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	07/27/2017 1830
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	07/27/2017 1830
Methylcyclohexane	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Methylene chloride	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Styrene	ND		1	5.0	0.41	ug/L	07/27/2017 1830
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Tetrachloroethene	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Toluene	ND		1	5.0	0.40	ug/L	07/27/2017 1830
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	07/27/2017 1830
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	07/27/2017 1830
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	07/27/2017 1830
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	07/27/2017 1830

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ47717-001

Matrix: Aqueous

Batch: 47717

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Vinyl chloride	ND		1	2.0	0.40	ug/L	07/27/2017 1830
Xylenes (total)	ND		1	5.0	0.40	ug/L	07/27/2017 1830
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		102	70-130				
Bromofluorobenzene		108	70-130				
Toluene-d8		111	70-130				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ47717-002

Matrix: Aqueous

Batch: 47717

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	85		1	85	60-140	07/27/2017 1733
Benzene	50	47		1	95	70-130	07/27/2017 1733
Bromodichloromethane	50	48		1	95	70-130	07/27/2017 1733
Bromoform	50	47		1	94	70-130	07/27/2017 1733
Bromomethane (Methyl bromide)	50	45		1	90	70-130	07/27/2017 1733
2-Butanone (MEK)	100	96		1	96	70-130	07/27/2017 1733
Carbon disulfide	50	44		1	87	70-130	07/27/2017 1733
Carbon tetrachloride	50	48		1	96	70-130	07/27/2017 1733
Chlorobenzene	50	47		1	94	70-130	07/27/2017 1733
Chloroethane	50	50		1	100	70-130	07/27/2017 1733
Chloroform	50	46		1	92	70-130	07/27/2017 1733
Chloromethane (Methyl chloride)	50	52		1	104	60-140	07/27/2017 1733
Cyclohexane	50	51		1	102	70-130	07/27/2017 1733
1,2-Dibromo-3-chloropropane (DBCP)	50	50		1	99	70-130	07/27/2017 1733
Dibromochloromethane	50	50		1	100	70-130	07/27/2017 1733
1,2-Dibromoethane (EDB)	50	48		1	96	70-130	07/27/2017 1733
1,2-Dichlorobenzene	50	48		1	95	70-130	07/27/2017 1733
1,3-Dichlorobenzene	50	47		1	94	70-130	07/27/2017 1733
1,4-Dichlorobenzene	50	47		1	94	70-130	07/27/2017 1733
Dichlorodifluoromethane	50	56		1	112	60-140	07/27/2017 1733
1,1-Dichloroethane	50	46		1	93	70-130	07/27/2017 1733
1,2-Dichloroethane	50	45		1	91	70-130	07/27/2017 1733
1,1-Dichloroethene	50	48		1	96	70-130	07/27/2017 1733
cis-1,2-Dichloroethene	50	46		1	92	70-130	07/27/2017 1733
trans-1,2-Dichloroethene	50	47		1	94	70-130	07/27/2017 1733
1,2-Dichloropropane	50	50		1	99	70-130	07/27/2017 1733
cis-1,3-Dichloropropene	50	51		1	102	70-130	07/27/2017 1733
trans-1,3-Dichloropropene	50	50		1	100	70-130	07/27/2017 1733
Ethylbenzene	50	48		1	95	70-130	07/27/2017 1733
2-Hexanone	100	99		1	99	70-130	07/27/2017 1733
Isopropylbenzene	50	48		1	96	70-130	07/27/2017 1733
Methyl acetate	50	46		1	92	70-130	07/27/2017 1733
Methyl tertiary butyl ether (MTBE)	50	38		1	77	70-130	07/27/2017 1733
4-Methyl-2-pentanone	100	94		1	94	70-130	07/27/2017 1733
Methylcyclohexane	50	50		1	100	70-130	07/27/2017 1733
Methylene chloride	50	41		1	82	70-130	07/27/2017 1733
Styrene	50	48		1	97	70-130	07/27/2017 1733
1,1,2,2-Tetrachloroethane	50	47		1	95	70-130	07/27/2017 1733
Tetrachloroethene	50	50		1	100	70-130	07/27/2017 1733
Toluene	50	51		1	102	70-130	07/27/2017 1733
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	51		1	102	70-130	07/27/2017 1733
1,2,4-Trichlorobenzene	50	47		1	93	70-130	07/27/2017 1733
1,1,1-Trichloroethane	50	46		1	93	70-130	07/27/2017 1733
1,1,2-Trichloroethane	50	48		1	96	70-130	07/27/2017 1733

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ47717-002

Matrix: Aqueous

Batch: 47717

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	47		1	95	70-130	07/27/2017 1733
Trichlorofluoromethane	50	52		1	103	70-130	07/27/2017 1733
Vinyl chloride	50	49		1	99	70-130	07/27/2017 1733
Xylenes (total)	100	93		1	93	70-130	07/27/2017 1733
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		99	70-130				
Bromofluorobenzene		110	70-130				
Toluene-d8		114	70-130				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ47952-001

Matrix: Aqueous

Batch: 47952

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		129	70-130				
Bromofluorobenzene		111	70-130				
Toluene-d8		112	70-130				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and \geq DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ47952-002

Matrix: Aqueous

Batch: 47952

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	46		1	92	70-130	07/31/2017 0923
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		90	70-130				
Bromofluorobenzene		80	70-130				
Toluene-d8		83	70-130				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.



Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number **74709**

Client AECOM	Report to Contact Scott Ross	Telephone No. / E-mail 803-254-4400	Custody No.
Address 101 Research Dr.	Sampler's Signature 	Analysis (Attach list if more space is needed)	Page 1 of 1
City Columbia	Printed Name Scott Ross	SG26040	Remarks / Cooler I.D.
State SC	Zip Code 29203		
Project Name SHAKESPEARE	Project No. 60534253		
Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	
MW-12D	7/24/17	1700	
MW-17D	7/25/17	1255	
SDW-3	7/25/17	1557	
Tap/Blank	7/26/17	1130	
<i>[Handwritten signature]</i>			

Turn Around Time Required (Prior lab approval required for expedited TAT.) <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)	Sample Disposal <input checked="" type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab	Possibly Hazardous Administration		GC Requirements (Specify)	
		<input checked="" type="checkbox"/> Non-hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	1. Received by	Date	Time
1. Relinquished by Elisabeth Huntington	Date 7/26/17	Time 1342			
2. Relinquished by	Date	Time			
3. Relinquished by	Date	Time			
4. Relinquished by	Date	Time			

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY	Receipt Temp. 2.3 °C
Received on line (Circle): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Receipt Temp. 2.3 °C

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-08

Page 1 of 1
Effective Date: 03/07/2017
Expiry Date: 03/07/2022

Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: SBE 1/7/26/17 Lot #: SG26040

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other _____		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
2. If custody seals were present, were they intact and unbroken?		
pH strip ID: _____ CI strip ID: _____		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>123123 °C</u> / / °C / / °C / / °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
4. Is the commercial courier's packing slip attached to this form?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
5. Were proper custody procedures (relinquished/received) followed?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
6. Were sample IDs listed on the COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
7. Were sample IDs listed on all sample containers?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
8. Was collection date & time listed on the COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
9. Was collection date & time listed on all sample containers?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
10. Did all container label information (ID, date, time) agree with the COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
11. Were tests to be performed listed on the COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
13. Was adequate sample volume available?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
15. Were any samples containers missing/excess (circle one) samples Not listed on COC?		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
17. Were all DRO/metals/nutrient samples received at a pH of < 2?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
19. Were all applicable NH3/TKN/cyanide/phenol/BNA (< 0.5mg/L) samples free of residual chlorine?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
20. Were collection temperatures documented on the COC for NC samples?		
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
22. Was the quote number used taken from the container label?		
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____		
Sample(s) <u>00262, 00412</u> were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.5 mg/L (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: _____		
SC Drinking Water Project Sample(s) pH verified to be < 2 by _____ Date: _____		
Sample(s) _____ were Not received at a pH of < 2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>SBE</u> Verified by: _____ Date: <u>7/26/17</u>		

Comments: _____

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: Shakespeare - Newberry

Project Number: 60534283

Lot Number: **SG27028**

Date Completed: 08/01/2017

N. Saikaly

08/04/2017 10:45 AM

Approved and released by:
Project Manager: Nisreen Saikaly



The electronic signature above is the equivalent of a handwritten signature.
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SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative AECOM Lot Number: SG27028

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: SG27028

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-19D	Aqueous	07/27/2017 1130	07/27/2017

(1 sample)

SHEALY ENVIRONMENTAL SERVICES, INC.

Detection Summary

AECOM

Lot Number: SG27028

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-19D	Aqueous	Trichloroethene	8260B	3.1	J	ug/L	6

(1 detection)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG27028-001
Description: MW-19D	Matrix: Aqueous
Date Sampled: 07/27/2017 1130	
Date Received: 07/27/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/31/2017 1302	TML		47952

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: SG27028-001
Description: MW-19D	Matrix: Aqueous
Date Sampled: 07/27/2017 1130	
Date Received: 07/27/2017	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/31/2017 1302	TML		47952

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	3.1	J	5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		129	70-130
Bromofluorobenzene		109	70-130
Toluene-d8		104	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ47952-001

Matrix: Aqueous

Batch: 47952

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	07/31/2017 1014
Benzene	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Bromodichloromethane	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Bromoform	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Bromomethane (Methyl bromide)	ND		1	5.0	0.40	ug/L	07/31/2017 1014
2-Butanone (MEK)	ND		1	10	2.0	ug/L	07/31/2017 1014
Carbon disulfide	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Chlorobenzene	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Chloroethane	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Chloroform	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Cyclohexane	ND		1	5.0	0.40	ug/L	07/31/2017 1014
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Dibromochloromethane	ND		1	5.0	0.40	ug/L	07/31/2017 1014
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	07/31/2017 1014
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	07/31/2017 1014
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	07/31/2017 1014
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	07/31/2017 1014
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	07/31/2017 1014
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	07/31/2017 1014
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	07/31/2017 1014
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	07/31/2017 1014
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	07/31/2017 1014
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	07/31/2017 1014
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	07/31/2017 1014
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Ethylbenzene	ND		1	5.0	0.40	ug/L	07/31/2017 1014
2-Hexanone	ND		1	10	2.0	ug/L	07/31/2017 1014
Isopropylbenzene	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Methyl acetate	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	07/31/2017 1014
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	07/31/2017 1014
Methylcyclohexane	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Methylene chloride	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Styrene	ND		1	5.0	0.41	ug/L	07/31/2017 1014
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Tetrachloroethene	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Toluene	ND		1	5.0	0.40	ug/L	07/31/2017 1014
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	07/31/2017 1014
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	07/31/2017 1014
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	07/31/2017 1014
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	07/31/2017 1014

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ47952-001

Matrix: Aqueous

Batch: 47952

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Trichlorofluoromethane	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Vinyl chloride	ND		1	2.0	0.40	ug/L	07/31/2017 1014
Xylenes (total)	ND		1	5.0	0.40	ug/L	07/31/2017 1014
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		129	70-130				
Bromofluorobenzene		111	70-130				
Toluene-d8		112	70-130				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and \geq DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ47952-002

Matrix: Aqueous

Batch: 47952

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	120		1	118	60-140	07/31/2017 0923
Benzene	50	50		1	100	70-130	07/31/2017 0923
Bromodichloromethane	50	56		1	113	70-130	07/31/2017 0923
Bromoform	50	48		1	96	70-130	07/31/2017 0923
Bromomethane (Methyl bromide)	50	48		1	95	70-130	07/31/2017 0923
2-Butanone (MEK)	100	110		1	109	70-130	07/31/2017 0923
Carbon disulfide	50	49		1	97	70-130	07/31/2017 0923
Carbon tetrachloride	50	50		1	101	70-130	07/31/2017 0923
Chlorobenzene	50	47		1	94	70-130	07/31/2017 0923
Chloroethane	50	54		1	108	70-130	07/31/2017 0923
Chloroform	50	49		1	98	70-130	07/31/2017 0923
Chloromethane (Methyl chloride)	50	51		1	103	60-140	07/31/2017 0923
Cyclohexane	50	54		1	107	70-130	07/31/2017 0923
1,2-Dibromo-3-chloropropane (DBCP)	50	59		1	118	70-130	07/31/2017 0923
Dibromochloromethane	50	48		1	97	70-130	07/31/2017 0923
1,2-Dibromoethane (EDB)	50	46		1	93	70-130	07/31/2017 0923
1,2-Dichlorobenzene	50	49		1	98	70-130	07/31/2017 0923
1,3-Dichlorobenzene	50	48		1	95	70-130	07/31/2017 0923
1,4-Dichlorobenzene	50	48		1	97	70-130	07/31/2017 0923
Dichlorodifluoromethane	50	65		1	131	60-140	07/31/2017 0923
1,1-Dichloroethane	50	49		1	98	70-130	07/31/2017 0923
1,2-Dichloroethane	50	52		1	104	70-130	07/31/2017 0923
1,1-Dichloroethene	50	49		1	99	70-130	07/31/2017 0923
cis-1,2-Dichloroethene	50	47		1	95	70-130	07/31/2017 0923
trans-1,2-Dichloroethene	50	47		1	95	70-130	07/31/2017 0923
1,2-Dichloropropane	50	50		1	101	70-130	07/31/2017 0923
cis-1,3-Dichloropropene	50	59		1	118	70-130	07/31/2017 0923
trans-1,3-Dichloropropene	50	49		1	98	70-130	07/31/2017 0923
Ethylbenzene	50	48		1	96	70-130	07/31/2017 0923
2-Hexanone	100	100		1	103	70-130	07/31/2017 0923
Isopropylbenzene	50	48		1	96	70-130	07/31/2017 0923
Methyl acetate	50	51		1	102	70-130	07/31/2017 0923
Methyl tertiary butyl ether (MTBE)	50	40		1	81	70-130	07/31/2017 0923
4-Methyl-2-pentanone	100	120		1	116	70-130	07/31/2017 0923
Methylcyclohexane	50	50		1	100	70-130	07/31/2017 0923
Methylene chloride	50	43		1	85	70-130	07/31/2017 0923
Styrene	50	48		1	96	70-130	07/31/2017 0923
1,1,2,2-Tetrachloroethane	50	52		1	104	70-130	07/31/2017 0923
Tetrachloroethene	50	47		1	94	70-130	07/31/2017 0923
Toluene	50	49		1	98	70-130	07/31/2017 0923
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	52		1	104	70-130	07/31/2017 0923
1,2,4-Trichlorobenzene	50	49		1	99	70-130	07/31/2017 0923
1,1,1-Trichloroethane	50	50		1	100	70-130	07/31/2017 0923
1,1,2-Trichloroethane	50	46		1	91	70-130	07/31/2017 0923

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ47952-002

Matrix: Aqueous

Batch: 47952

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	46		1	92	70-130	07/31/2017 0923
Trichlorofluoromethane	50	58		1	117	70-130	07/31/2017 0923
Vinyl chloride	50	50		1	101	70-130	07/31/2017 0923
Xylenes (total)	100	94		1	94	70-130	07/31/2017 0923
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		90	70-130				
Bromofluorobenzene		80	70-130				
Toluene-d8		83	70-130				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

**Chain of Custody
and
Miscellaneous Documents**

Number 74711

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Chain of Custody Record

Client Address City State Zip Code	Request to Contact Sampler's Signature Printed Name Title	Telephone No. / E-mail Analyte (attach list if more space is needed)	Quote No. Page 1 of 1	Barcode SG27028	Remarks / Cooler I.D.
Project No. Sample ID / Description (Containers for each sample may be combined on one line.)	Method Date Time	No. of Containers by Preservative Type H2O2 HNO3 HCl H2SO4 Other	Possible Hazard Identification Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown <input type="checkbox"/>	QC Requirements (Specify)	
Turn Around Time Required (Prior lab approval required for expedited TAT.) Standard <input type="checkbox"/> Rush (Specify)	Sample Disposal Return to Client <input type="checkbox"/> Dispose by Lab <input checked="" type="checkbox"/>	Date Time	1. Received by Date Time	Date Time	Date Time
Relinquished by Relinquished by Relinquished by Relinquished by	Date Time	Date Time	Date Time	Date Time	Date Time
Note: All samples are retained for four weeks from receipt unless other arrangements are made.	Laboratory received by Date Time	Laboratory received by Date Time	Laboratory received by Date Time	Laboratory received by Date Time	Laboratory received by Date Time

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-08

Page 1 of 1
Effective Date: 03/07/2017
Expiry Date: 03/07/2022

Sample Receipt Checklist (SRC)

Client: Aecom

Cooler Inspected by/date: ELO 17-27-17 Lot #: SG27028

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 2. If custody seals were present, were they intact and unbroken?
pH strip ID: _____ CI strip ID: _____		
Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: <u>1/1</u> °C <u>19.2/19.2</u> °C <u>1/1</u> °C <u>1/1</u> °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C		
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/> 3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: <u>phone</u> / <u>email</u> / <u>face-to-face</u> (circle one).
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	5. Were proper custody procedures (relinquished/received) followed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	6. Were sample IDs listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	7. Were sample IDs listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	8. Was collection date & time listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	9. Was collection date & time listed on all sample containers?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	10. Did all container label information (ID, date, time) agree with the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	11. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	13. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/> 16. Were bubbles present >"pea-size" (½" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 17. Were all DRO/metals/nutrient samples received at a pH of < 2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 19. Were all applicable NH3/TKN/cyanide/phenol/BNA (< 0.5mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> 21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	22. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____.		
Sample(s) _____ were received with bubbles >6 mm in diameter.		
Sample(s) _____ were received with TRC > 0.5 mg/L (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: _____.		
SC Drinking Water Project Sample(s) pH verified to be < 2 by _____ Date: _____		
Sample(s) _____ were Not received at a pH of < 2 and were adjusted accordingly using SR# _____		
Sample labels applied by: <u>ELO</u> Verified by: _____ Date: <u>7-27-17</u>		

Comments: _____



10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Client: Scott Ross
AECOM
101 Research Dr
Columbia, SC 29203

Phone: 803-201-9662

Fax:

Identifier: 0920F

Date Rec: 06/20/2017

Report Date: 06/26/2017

Client Project #: 60534283

Client Project Name: Phase II RI, Newberry, SC

Purchase Order #: 90475ACM

Analysis Requested: CENSUS

Reviewed By:

NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

Client: AECOM
Project: Phase II RI, Newberry, SC

MI Project Number: 0920F
Date Received: 06/20/2017

Sample Information

Client Sample ID:	MW1	MW6	MW6D	MW7I	MW8
Sample Date:	06/19/2017	06/19/2017	06/19/2017	06/19/2017	06/19/2017
Units:	cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Analyst:	JS	JS	JS	JS	JS

Dechlorinating Bacteria

Organism	Gene	MW1	MW6	MW6D	MW7I	MW8
<i>Dehalococcoides</i>	DHC	<5.00E-01	5.10E+00	<5.00E-01	<5.00E-01	<5.00E-01
tceA Reductase	TCE	<5.00E-01	1.00E-01 (J)	<5.00E-01	<5.00E-01	<5.00E-01
BAV1 Vinyl Chloride Reductase	BVC	<5.00E-01	1.00E-01 (J)	<5.00E-01	<5.00E-01	<5.00E-01
Vinyl Chloride Reductase	VCR	<5.00E-01	4.00E-01 (J)	<5.00E-01	<5.00E-01	<5.00E-01
<i>Dehalobacter spp.</i>	DHBt	<4.60E+00	4.55E+03	5.51E+02	<4.60E+00	<4.60E+00

Legend:

NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
 < = Result not detected

Client: AECOM
Project: Phase II RI, Newberry, SC

MI Project Number: 0920F
Date Received: 06/20/2017

Sample Information

Client Sample ID:	MW10	MW10I	MW9I	MW20	MW20I
Sample Date:	06/19/2017	06/20/2017	06/20/2017	06/20/2017	06/20/2017
Units:	cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Analyst:	JS	JS	JS	JS	JS

Dechlorinating Bacteria

<i>Dehalococcoides</i>	DHC	<5.00E-01	<5.00E-01	<1.11E+01	<5.00E-01	<5.00E-01
tceA Reductase	TCE	<5.00E-01	<5.00E-01	<1.11E+01	<5.00E-01	<5.00E-01
BAV1 Vinyl Chloride Reductase	BVC	<5.00E-01	<5.00E-01	<1.11E+01	<5.00E-01	<5.00E-01
Vinyl Chloride Reductase	VCR	<5.00E-01	<5.00E-01	<1.11E+01	<5.00E-01	<5.00E-01
<i>Dehalobacter spp.</i>	DHBt	<4.80E+00	<4.70E+00	<1.11E+02	<4.50E+00	<4.60E+00

Legend:

NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
 < = Result not detected

Quality Assurance/Quality Control Data

Samples Received 6/20/2017

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	06/20/2017	06/26/2017	0 °C	99%	non-detect	non-detect
DHBt	06/20/2017	06/26/2017	0 °C	112%	non-detect	non-detect
BVC	06/20/2017	06/26/2017	0 °C	100%	non-detect	non-detect
TCE	06/20/2017	06/26/2017	0 °C	102%	non-detect	non-detect
VCR	06/20/2017	06/26/2017	0 °C	105%	non-detect	non-detect

Samples Received 6/21/2017

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
DHC	06/21/2017	06/26/2017	0 °C	97%	non-detect	non-detect
BVC	06/21/2017	06/26/2017	0 °C	100%	non-detect	non-detect
TCE	06/21/2017	06/26/2017	0 °C	102%	non-detect	non-detect
VCR	06/21/2017	06/26/2017	0 °C	105%	non-detect	non-detect
DHBt	06/21/2017	06/26/2017	0 °C	112%	non-detect	non-detect



Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

June 26, 2017

Scott Ross
AECOM
101 Research Drive
Columbia, SC 29203

RE: **SHAKESPEARE-NEWBERRY/ 60534823**

Pace Workorder: 23045

Dear Scott Ross:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, June 21, 2017. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ruth Welsh 06/26/2017
Ruth.Welsh@pacelabs.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.
Please email PAESfeedback@pacelabs.com.

Total Number of Pages 20

Report ID: 23045 - 938734

Page 1 of 17



CERTIFICATE OF ANALYSIS

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LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water and Solid & Hazardous Waste
Accreditor:	West Virginia Department of Environmental Protection, Division of Water and Waste Management
Accreditation ID:	395
Scope:	Non-Potable Water
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water; Solid and Chemical Materials
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water; Solid and Hazardous Waste
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, PAES is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).



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SAMPLE SUMMARY

Workorder: 23045 SHAKESPEARE-NEWBERRY/ 60534823

Lab ID	Sample ID	Matrix	Date Collected	Date Received
230450001	MW-1	Water	6/19/2017 12:00	6/21/2017 11:15
230450002	MW6	Water	6/19/2017 11:50	6/21/2017 11:15
230450003	MW6D	Water	6/19/2017 13:50	6/21/2017 11:15
230450004	MW7I	Water	6/19/2017 16:00	6/21/2017 11:15
230450005	MW8	Water	6/19/2017 14:05	6/21/2017 11:15
230450006	MW10	Water	6/19/2017 15:15	6/21/2017 11:15
230450007	MW-20	Water	6/20/2017 09:30	6/21/2017 11:15
230450008	MW-10I	Water	6/20/2017 10:25	6/21/2017 11:15
230450009	MW-20I	Water	6/20/2017 10:50	6/21/2017 11:15
230450010	MW-9I	Water	6/20/2017 12:00	6/21/2017 11:15



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ANALYTICAL RESULTS

Workorder: 23045 SHAKESPEARE-NEWBERRY/ 60534823

Lab ID: **230450001** Date Received: 6/21/2017 11:15 Matrix: Water
 Sample ID: **MW-1** Date Collected: 6/19/2017 12:00

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
------------	---------	-------	-----	-----	----	----------	----	------------

RISK - PAES

Analysis Desc: AM20GAX	Analytical Method: AM20GAX							
------------------------	----------------------------	--	--	--	--	--	--	--

Methane	47	ug/l	0.50	0.027	1	6/23/2017 10:09	BW	n
Ethane	0.010J	ug/l	0.10	0.0030	1	6/23/2017 10:09	BW	n
Ethene	0.0047J	ug/l	0.10	0.0010	1	6/23/2017 10:09	BW	n
Carbon Dioxide	27	mg/l	5.0	0.45	1	6/23/2017 10:09	BW	n



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ANALYTICAL RESULTS

Workorder: 23045 SHAKESPEARE-NEWBERRY/ 60534823

Lab ID: **230450002** Date Received: 6/21/2017 11:15 Matrix: Water
 Sample ID: **MW6** Date Collected: 6/19/2017 11:50

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
------------	---------	-------	-----	-----	----	----------	----	------------

RISK - PAES

Analysis Desc: AM20GAX	Analytical Method: AM20GAX							
------------------------	----------------------------	--	--	--	--	--	--	--

Methane	560	ug/l	0.50	0.027	1	6/23/2017 10:25	BW	n
Ethane	0.084J	ug/l	0.10	0.0030	1	6/23/2017 10:25	BW	n
Ethene	0.13	ug/l	0.10	0.0010	1	6/23/2017 10:25	BW	n
Carbon Dioxide	260	mg/l	5.0	0.45	1	6/23/2017 10:25	BW	n



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ANALYTICAL RESULTS

Workorder: 23045 SHAKESPEARE-NEWBERRY/ 60534823

Lab ID: **230450003** Date Received: 6/21/2017 11:15 Matrix: Water
 Sample ID: **MW6D** Date Collected: 6/19/2017 13:50

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
------------	---------	-------	-----	-----	----	----------	----	------------

RISK - PAES

Analysis Desc: AM20GAX	Analytical Method: AM20GAX							
------------------------	----------------------------	--	--	--	--	--	--	--

Methane	3.1	ug/l	0.50	0.027	1	6/23/2017 11:34	BW	n
Ethane	0.051J	ug/l	0.10	0.0030	1	6/23/2017 11:34	BW	n
Ethene	0.018J	ug/l	0.10	0.0010	1	6/23/2017 11:34	BW	n
Carbon Dioxide	5.0 U	mg/l	5.0	0.45	1	6/23/2017 11:34	BW	n



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ANALYTICAL RESULTS

Workorder: 23045 SHAKESPEARE-NEWBERRY/ 60534823

Lab ID: **230450004** Date Received: 6/21/2017 11:15 Matrix: Water
 Sample ID: **MW71** Date Collected: 6/19/2017 16:00

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
------------	---------	-------	-----	-----	----	----------	----	------------

RISK - PAES

Analysis Desc: AM20GAX	Analytical Method: AM20GAX							
------------------------	----------------------------	--	--	--	--	--	--	--

Methane	100	ug/l	0.50	0.027	1	6/23/2017 11:47	BW	n
Ethane	0.018J	ug/l	0.10	0.0030	1	6/23/2017 11:47	BW	n
Ethene	0.47	ug/l	0.10	0.0010	1	6/23/2017 11:47	BW	n
Carbon Dioxide	180	mg/l	5.0	0.45	1	6/23/2017 11:47	BW	n



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ANALYTICAL RESULTS

Workorder: 23045 SHAKESPEARE-NEWBERRY/ 60534823

Lab ID: **230450005** Date Received: 6/21/2017 11:15 Matrix: Water
 Sample ID: **MW8** Date Collected: 6/19/2017 14:05

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
------------	---------	-------	-----	-----	----	----------	----	------------

RISK - PAES

Analysis Desc: AM20GAX	Analytical Method: AM20GAX							
------------------------	----------------------------	--	--	--	--	--	--	--

Methane	340	ug/l	0.50	0.027	1	6/23/2017 11:58	BW	n
Ethane	0.014J	ug/l	0.10	0.0030	1	6/23/2017 11:58	BW	n
Ethene	0.030J	ug/l	0.10	0.0010	1	6/23/2017 11:58	BW	n
Carbon Dioxide	210	mg/l	5.0	0.45	1	6/23/2017 11:58	BW	n



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ANALYTICAL RESULTS

Workorder: 23045 SHAKESPEARE-NEWBERRY/ 60534823

Lab ID: **230450006** Date Received: 6/21/2017 11:15 Matrix: Water
 Sample ID: **MW10** Date Collected: 6/19/2017 15:15

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
------------	---------	-------	-----	-----	----	----------	----	------------

RISK - PAES

Analysis Desc: AM20GAX	Analytical Method: AM20GAX							
------------------------	----------------------------	--	--	--	--	--	--	--

Methane	2.2	ug/l	0.50	0.027	1	6/23/2017 12:09	BW	n
Ethane	0.038J	ug/l	0.10	0.0030	1	6/23/2017 12:09	BW	n
Ethene	0.061J	ug/l	0.10	0.0010	1	6/23/2017 12:09	BW	n
Carbon Dioxide	100	mg/l	5.0	0.45	1	6/23/2017 12:09	BW	n



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ANALYTICAL RESULTS

Workorder: 23045 SHAKESPEARE-NEWBERRY/ 60534823

Lab ID: **230450007** Date Received: 6/21/2017 11:15 Matrix: Water
 Sample ID: **MW-20** Date Collected: 6/20/2017 09:30

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
------------	---------	-------	-----	-----	----	----------	----	------------

RISK - PAES

Analysis Desc: AM20GAX	Analytical Method: AM20GAX							
------------------------	----------------------------	--	--	--	--	--	--	--

Methane	0.99	ug/l	0.50	0.027	1	6/23/2017 12:21	BW	n
Ethane	0.0090J	ug/l	0.10	0.0030	1	6/23/2017 12:21	BW	n
Ethene	0.017J	ug/l	0.10	0.0010	1	6/23/2017 12:21	BW	n
Carbon Dioxide	66	mg/l	5.0	0.45	1	6/23/2017 12:21	BW	n



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ANALYTICAL RESULTS

Workorder: 23045 SHAKESPEARE-NEWBERRY/ 60534823

Lab ID: **230450008** Date Received: 6/21/2017 11:15 Matrix: Water
 Sample ID: **MW-10I** Date Collected: 6/20/2017 10:25

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
------------	---------	-------	-----	-----	----	----------	----	------------

RISK - PAES

Analysis Desc: AM20GAX	Analytical Method: AM20GAX							
------------------------	----------------------------	--	--	--	--	--	--	--

Methane	0.88	ug/l	0.50	0.027	1	6/23/2017 12:33	BW	n
Ethane	0.046J	ug/l	0.10	0.0030	1	6/23/2017 12:33	BW	n
Ethene	0.038J	ug/l	0.10	0.0010	1	6/23/2017 12:33	BW	n
Carbon Dioxide	70	mg/l	5.0	0.45	1	6/23/2017 12:33	BW	n



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ANALYTICAL RESULTS

Workorder: 23045 SHAKESPEARE-NEWBERRY/ 60534823

Lab ID: **230450009** Date Received: 6/21/2017 11:15 Matrix: Water
 Sample ID: **MW-20I** Date Collected: 6/20/2017 10:50

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
------------	---------	-------	-----	-----	----	----------	----	------------

RISK - PAES

Analysis Desc: AM20GAX	Analytical Method: AM20GAX							
------------------------	----------------------------	--	--	--	--	--	--	--

Methane	0.45J	ug/l	0.50	0.027	1	6/23/2017 12:46	BW	n
Ethane	0.040J	ug/l	0.10	0.0030	1	6/23/2017 12:46	BW	n
Ethene	0.017J	ug/l	0.10	0.0010	1	6/23/2017 12:46	BW	n
Carbon Dioxide	70	mg/l	5.0	0.45	1	6/23/2017 12:46	BW	n



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ANALYTICAL RESULTS

Workorder: 23045 SHAKESPEARE-NEWBERRY/ 60534823

Lab ID: **230450010** Date Received: 6/21/2017 11:15 Matrix: Water
 Sample ID: **MW-9I** Date Collected: 6/20/2017 12:00

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
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RISK - PAES

Analysis Desc: AM20GAX	Analytical Method: AM20GAX							
------------------------	----------------------------	--	--	--	--	--	--	--

Methane	4.0	ug/l	0.50	0.027	1	6/23/2017 12:58	BW	n
Ethane	0.23	ug/l	0.10	0.0030	1	6/23/2017 12:58	BW	n
Ethene	0.49	ug/l	0.10	0.0010	1	6/23/2017 12:58	BW	n
Carbon Dioxide	26	mg/l	5.0	0.45	1	6/23/2017 12:58	BW	n



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ANALYTICAL RESULTS QUALIFIERS

Workorder: 23045 SHAKESPEARE-NEWBERRY/ 60534823

DEFINITIONS/QUALIFIERS

MDL	Method Detection Limit. Can be used synonymously with LOD; Limit Of Detection.
PQL	Practical Quantitation Limit. Can be used synonymously with LOQ; Limit Of Quantitation.
ND	Not detected at or above reporting limit.
DF	Dilution Factor.
S	Surrogate.
RPD	Relative Percent Difference.
% Rec	Percent Recovery.
U	Indicates the compound was analyzed for, but not detected at or above the noted concentration.
J	Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL).
n	The laboratory does not hold NELAP/TNI accreditation for this method or analyte.



QUALITY CONTROL DATA

Workorder: 23045 SHAKESPEARE-NEWBERRY/ 60534823

QC Batch: DISG/6186 Analysis Method: AM20GAX

QC Batch Method: AM20GAX

Associated Lab Samples: 230450001, 230450002, 230450003, 230450004, 230450005, 230450006, 230450007, 230450008, 230450009, 230450010

METHOD BLANK: 49501

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Methane	ug/l	0.50 U	0.50	n
Ethane	ug/l	0.10 U	0.10	n
Ethene	ug/l	0.10 U	0.10	n

METHOD BLANK: 49502

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Carbon Dioxide	mg/l	5.0 U	5.0	n

LABORATORY CONTROL SAMPLE & LCSD: 49503 49505

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Methane	ug/l	750	760	760	102	101	80-120	0.99	20	n
Ethane	ug/l	38	38	38	101	102	80-120	0.99	20	n
Ethene	ug/l	35	36	36	101	101	80-120	0	20	n

LABORATORY CONTROL SAMPLE & LCSD: 49504 49506

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Carbon Dioxide	mg/l	120	120	120	100	99	80-120	1	20	n



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Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA QUALIFIERS

Workorder: 23045 SHAKESPEARE-NEWBERRY/ 60534823

QUALITY CONTROL PARAMETER QUALIFIERS

n The laboratory does not hold NELAP/TNI accreditation for this method or analyte.



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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 23045 SHAKESPEARE-NEWBERRY/ 60534823

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
230450001	MW-1			AM20GAX	DISG/6186
230450002	MW6			AM20GAX	DISG/6186
230450003	MW6D			AM20GAX	DISG/6186
230450004	MW7I			AM20GAX	DISG/6186
230450005	MW8			AM20GAX	DISG/6186
230450006	MW10			AM20GAX	DISG/6186
230450007	MW-20			AM20GAX	DISG/6186
230450008	MW-10I			AM20GAX	DISG/6186
230450009	MW-20I			AM20GAX	DISG/6186
230450010	MW-9I			AM20GAX	DISG/6186



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Section A
 Required Client Information:
 Company: AECON
 Address: 101 Reservoir Dr.
 Email To: Columbia, SC 29203
 Phone: (803) 254-4400 Fax:
 Requested Due Date/TAT: _____

Section B
 Required Project Information:
 Report To: Scott Ross
 Copy To: _____
 Purchase Order No.: _____
 Project Name: 346551002 - Newberry
 Project Number: 60534823

Section C
 Invoice Information:
 Attention: _____
 Company Name: _____
 Address: _____
 Pace Quote Reference: _____
 Pace Project Manager: _____
 Pace Profile #: _____

Page: _____ of _____
 009245

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER _____

Site Location STATE: SC

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	SAMPLE TYPE (G=GRAB C=COMP)		COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Y/N ↑	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
			MATRIX CODE (see valid codes to left)	DATE	TIME	DATE							
1	MW-1	DW	6/17/17	1200	6/17/17	1200							
2	MW-6	WT	6/17/17	1150	6/17/17	1150							
3	MW-6-D	WW	6/17/17	1350	6/17/17	1350							
4	MW-7-I	P	6/17/17	1400	6/17/17	1400							
5	MW-8	SL	6/17/17	1515	6/17/17	1515							
6	MW-10	OL	6/17/17	0930	6/17/17	0930							
7	MW-10	WP	6/17/17	1025	6/17/17	1025							
8	MW-10-I	AR	6/17/17	1050	6/17/17	1050							
9	MW-10-I	TS	6/17/17	1200	6/17/17	1200							
10	MW-9-I	OT											
11													
12													

ADDITIONAL COMMENTS
 Relinquished by / Affiliation: Ellie H. Harris
 Date: 6/20/17 Time: 1400
 Accepted by / Affiliation: Scott Ross
 Date Signed: 6-21-17 Time: 11:55
 SAMPLE CONDITIONS
 Received on: _____
 Custody: _____
 Sealed Cooler: _____
 Samples Intact: _____

Temp in °C: _____

ORIGINAL

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Justin Butler
 SIGNATURE of SAMPLER: [Signature]
 DATE Signed (MM/DD/YY): 6/20/17

Cooler Receipt Form

Client Name: Aecom Project: 60534823 Lab Work Order: 23045

A. Shipping/Container Information (circle appropriate response)

Courier: FedEx UPS USPS Client Other: _____ Air Bill Present: Yes No

Tracking Number: 786936406422

Custody Seal on Cooler/Box Present: Yes No Seals Intact: Yes No

Cooler/Box Packing Material: Bubble Wrap Absorbent Foam Other: _____

Type of Ice: Wet Blue None Ice Intact: Yes Melted

Cooler Temperature: 50C Radiation Screened: Yes No Chain of Custody Present: Yes No

Comments: _____

B. Laboratory Assignment/Log-in (check appropriate response)

	YES	NO	N/A	Comment Reference non-Conformance
Chain of Custody properly filled out	✓			
Chain of Custody relinquished	✓			
Sampler Name & Signature on COC	✓			
Containers intact		✓		
Were samples in separate bags	✓			
Sample container labels match COC Sample name/date and time collected	✓			
Sufficient volume provided	✓			
PAES containers used	✓			
Are containers properly preserved for the requested testing? (as labeled)	✓			
If an unknown preservation state, were containers checked? Exception: VOA's coliform			✓	If yes, see pH form.
Was volume for dissolved testing field filtered, as noted on the COC? Was volume received in a preserved container?			✓	

Comments: _____

Cooler contents examined/received by: CG Date: 6.21.17

Project Manager Review: JEM Date: 6/21/17

NON-CONFORMANCE FORM

PAES Work Order #: 23045

Date: 6.21.17 Time of Receipt: 11:15 Receiver: LG

Client: Aecom

REASON FOR NON-CONFORMANCE.

MW-1, MW-6, MW6D & MW8. one vial broke.

ACTION TAKEN:

Client name: Aecom

Date: 6/21/17

Time: 16:00

Approved to continue with analyses

Customer Service Initials: Jem

Date: 6/21/17

PHASE II RI SOIL DATA

Report of Analysis

AECOM

101 Research Drive
Columbia, SC 29203
Attention: Scott Ross

Project Name: Shakespeare - Newberry

Project Number: 60534283

Lot Number: **TC30002**

Date Completed: 07/03/2018

Revision Date: 07/03/2018

Project Manager: **Nisreen Saikaly**



07/03/2018 3:54 PM

Approved and released by:
Project Manager: Grant Wilton



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SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

Case Narrative AECOM Lot Number: TC30002

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

REPORT REVISION

This report supersedes and replaces any prior reports issued under this lot number. The details of the applicable revisions are detailed in a Report Revision Notice provided under separate cover.

Sample -001: The sample was initially analyzed from a medium level (methanol) vial with elevated LOQ's. The sample was re-analyzed at a 1x dilution. The results from Run 1 are reported.

Volatile Organic Compounds

The laboratory control sample (LCS) for analytical batch 68708 exceeded acceptance criteria for Carbon disulfide (130.7%). This analyte was biased high and not detected in the associated samples, TC30002-001, TC30002-027 through TC30002-043.

Styrene is reported as an estimated value in samples TC30002-013, TC30002-026, TC30002-031, TC30002-032 and TC30002-047 as the result was above the upper calibration level. The sample was re-analyzed from the medium level (methanol) vial, but was not reported due to the result being below the LOQ therefore only the low level was reported.

Trichloroethene is reported as an estimated value in samples TC30002-023 and TC30002-024 as the result was above the upper calibration level. The sample was re-analyzed from the medium level (methanol) vial, but was not reported due to the result being below the LOQ therefore only the low level was reported.

Acetone is reported as an estimated value in sample TC30002-030 as the result was above the upper calibration level. The sample was re-analyzed from the medium level (methanol) vial, but was not reported due to the result being below the LOQ therefore only the low level was reported.

The LCS/LCSD for analytical batch 68915 exceeded acceptance criteria for the following analytes: carbon disulfide (135.9% and 131.3%) and methyl acetate (140.5%). These analytes were biased high and were not detected in the samples affected: TC30002-032.

cis-1,2-Dichloroethene is reported as an estimated value in samples TC30002-036 and TC30002-039 as the result was above the upper calibration level. The sample was re-analyzed from the medium level (methanol) vial, but was not reported due to the result being below the LOQ therefore only the low level was reported.

Surrogate recovery for sample TC30002-022 was outside control limits. Re-analysis was performed with concurring results. The original analysis of the medium level has been reported.

The RPD for Acetone, Methylene chloride, Methylene chloride, Styrene and Trichloroethene exceeded method control limits in batch 68708; however, all other QC criteria for the LCS were within acceptance criteria and method control limits. The associated sample results were reported and no corrective action was required.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary

AECOM

Lot Number: TC30002

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	B-46(2')	Solid	03/29/2018 1050	03/29/2018
002	B-46(4')	Solid	03/29/2018 1055	03/29/2018
003	B-46(6')	Solid	03/29/2018 1100	03/29/2018
004	B-46(8')	Solid	03/29/2018 1100	03/29/2018
005	B-46(10')	Solid	03/29/2018 1105	03/29/2018
006	B-46(12')	Solid	03/29/2018 1108	03/29/2018
007	B-46(14')	Solid	03/29/2018 1112	03/29/2018
008	B-46(15')	Solid	03/29/2018 1115	03/29/2018
009	B-50(2')	Solid	03/29/2018 1123	03/29/2018
010	B-50(4')	Solid	03/29/2018 1125	03/29/2018
011	B-50(6')	Solid	03/29/2018 1130	03/29/2018
012	B-50(8')	Solid	03/29/2018 1130	03/29/2018
013	B-50(10')	Solid	03/29/2018 1135	03/29/2018
014	B-50(12')	Solid	03/29/2018 1138	03/29/2018
015	B-50(14')	Solid	03/29/2018 1144	03/29/2018
016	B-50(15')	Solid	03/29/2018 1153	03/29/2018
017	B-47(2')	Solid	03/29/2018 1358	03/29/2018
018	B-47(4')	Solid	03/29/2018 1400	03/29/2018
019	B-47(6')	Solid	03/29/2018 1405	03/29/2018
020	B-47(8')	Solid	03/29/2018 1407	03/29/2018
021	B-47(10')	Solid	03/29/2018 1410	03/29/2018
022	B-47(12')	Solid	03/29/2018 1412	03/29/2018
023	B-47(14')	Solid	03/29/2018 1413	03/29/2018
024	B-47(15')	Solid	03/29/2018 1415	03/29/2018
025	B-48(2')	Solid	03/29/2018 1422	03/29/2018
026	B-48(4')	Solid	03/29/2018 1420	03/29/2018
027	B-48(6')	Solid	03/29/2018 1425	03/29/2018
028	B-48(8')	Solid	03/29/2018 1427	03/29/2018
029	B-48(10')	Solid	03/29/2018 1430	03/29/2018
030	B-48(12')	Solid	03/29/2018 1431	03/29/2018
031	B-48(14')	Solid	03/29/2018 1434	03/29/2018
032	B-48(15')	Solid	03/29/2018 1436	03/29/2018
033	B-49(2')	Solid	03/29/2018 1445	03/29/2018
034	B-49(4')	Solid	03/29/2018 1446	03/29/2018
035	B-49(6')	Solid	03/29/2018 1448	03/29/2018
036	B-49(8')	Solid	03/29/2018 1450	03/29/2018
037	B-49(10')	Solid	03/29/2018 1452	03/29/2018
038	B-49(12')	Solid	03/29/2018 1453	03/29/2018
039	B-49(14')	Solid	03/29/2018 1456	03/29/2018
040	B-49(15')	Solid	03/29/2018 1459	03/29/2018
041	B-45(2')	Solid	03/29/2018 1150	03/29/2018
042	B-45(4')	Solid	03/29/2018 1155	03/29/2018
043	B-45(6')	Solid	03/29/2018 1200	03/29/2018
044	B-45(8')	Solid	03/29/2018 1203	03/29/2018
045	B-45(10')	Solid	03/29/2018 1205	03/29/2018

Sample Summary (Continued)

Lot Number: TC30002

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
046	B-45(12')	Solid	03/29/2018 1208	03/29/2018
047	B-45(14')	Solid	03/29/2018 1212	03/29/2018
048	B-45(15')	Solid	03/29/2018 1215	03/29/2018
049	TB-1	Aqueous	03/29/2018	03/29/2018
050	TB-2	Aqueous	03/29/2018	03/29/2018

(50 samples)

SHEALY ENVIRONMENTAL SERVICES, INC.

Detection Summary

AECOM

Lot Number: TC30002

Sample ID	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	B-46(2')	Solid	Acetone	8260B	5.8	J	ug/kg	16
002	B-46(4')	Solid	Ethylbenzene	8260B	4900		ug/kg	18
002	B-46(4')	Solid	Methyl acetate	8260B	140	J	ug/kg	18
003	B-46(6')	Solid	Acetone	8260B	67		ug/kg	20
003	B-46(6')	Solid	Ethylbenzene	8260B	14		ug/kg	20
004	B-46(8')	Solid	Acetone	8260B	31		ug/kg	22
005	B-46(10')	Solid	Ethylbenzene	8260B	3.2	J	ug/kg	24
006	B-46(12')	Solid	Acetone	8260B	12	J	ug/kg	26
008	B-46(15')	Solid	cis-1,2-Dichloroethene	8260B	3.5	J	ug/kg	30
008	B-46(15')	Solid	Trichloroethene	8260B	4.2	J	ug/kg	31
009	B-50(2')	Solid	Acetone	8260B	82		ug/kg	32
009	B-50(2')	Solid	Styrene	8260B	37		ug/kg	32
010	B-50(4')	Solid	Acetone	8260B	68		ug/kg	34
010	B-50(4')	Solid	2-Butanone (MEK)	8260B	4.1	J	ug/kg	34
010	B-50(4')	Solid	Styrene	8260B	12		ug/kg	34
011	B-50(6')	Solid	Acetone	8260B	110		ug/kg	36
011	B-50(6')	Solid	2-Butanone (MEK)	8260B	5.5	J	ug/kg	36
011	B-50(6')	Solid	Styrene	8260B	33		ug/kg	36
011	B-50(6')	Solid	Trichloroethene	8260B	5.9		ug/kg	37
012	B-50(8')	Solid	Acetone	8260B	43		ug/kg	38
012	B-50(8')	Solid	Styrene	8260B	63		ug/kg	38
012	B-50(8')	Solid	Trichloroethene	8260B	3.9	J	ug/kg	39
013	B-50(10')	Solid	Acetone	8260B	150		ug/kg	40
013	B-50(10')	Solid	Methylene chloride	8260B	6.9		ug/kg	40
013	B-50(10')	Solid	Styrene	8260B	280	E	ug/kg	40
013	B-50(10')	Solid	Trichloroethene	8260B	5.1	J	ug/kg	41
014	B-50(12')	Solid	Acetone	8260B	63		ug/kg	42
014	B-50(12')	Solid	Styrene	8260B	110		ug/kg	42
014	B-50(12')	Solid	Trichloroethene	8260B	10		ug/kg	43
015	B-50(14')	Solid	Acetone	8260B	140		ug/kg	44
015	B-50(14')	Solid	Styrene	8260B	140		ug/kg	44
015	B-50(14')	Solid	Trichloroethene	8260B	8.7		ug/kg	45
016	B-50(15')	Solid	Acetone	8260B	100		ug/kg	46
016	B-50(15')	Solid	Styrene	8260B	180		ug/kg	46
016	B-50(15')	Solid	Trichloroethene	8260B	2.5	J	ug/kg	47
017	B-47(2')	Solid	Acetone	8260B	120		ug/kg	48
017	B-47(2')	Solid	Methylene chloride	8260B	12		ug/kg	48
017	B-47(2')	Solid	Styrene	8260B	170		ug/kg	48
018	B-47(4')	Solid	Acetone	8260B	91		ug/kg	50
018	B-47(4')	Solid	Methylene chloride	8260B	11		ug/kg	50
018	B-47(4')	Solid	Styrene	8260B	120		ug/kg	50
019	B-47(6')	Solid	Acetone	8260B	200		ug/kg	52
019	B-47(6')	Solid	cis-1,2-Dichloroethene	8260B	5.2		ug/kg	52
019	B-47(6')	Solid	Methylene chloride	8260B	14		ug/kg	52
019	B-47(6')	Solid	Styrene	8260B	120		ug/kg	52

Detection Summary (Continued)

Lot Number: TC30002

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
019	B-47(6')	Solid	Trichloroethene	8260B	4.1	J	ug/kg	53
020	B-47(8')	Solid	Acetone	8260B	140		ug/kg	54
020	B-47(8')	Solid	cis-1,2-Dichloroethene	8260B	16		ug/kg	54
020	B-47(8')	Solid	Styrene	8260B	110		ug/kg	54
020	B-47(8')	Solid	Trichloroethene	8260B	12		ug/kg	55
021	B-47(10')	Solid	Acetone	8260B	280		ug/kg	56
021	B-47(10')	Solid	cis-1,2-Dichloroethene	8260B	23		ug/kg	56
021	B-47(10')	Solid	Styrene	8260B	280		ug/kg	56
021	B-47(10')	Solid	Trichloroethene	8260B	180		ug/kg	57
022	B-47(12')	Solid	Acetone	8260B	190		ug/kg	58
022	B-47(12')	Solid	1,1-Dichloroethene	8260B	2.7	J	ug/kg	58
022	B-47(12')	Solid	cis-1,2-Dichloroethene	8260B	29		ug/kg	58
022	B-47(12')	Solid	Methylene chloride	8260B	8.6		ug/kg	58
022	B-47(12')	Solid	Styrene	8260B	450		ug/kg	58
022	B-47(12')	Solid	Trichloroethene	8260B	580		ug/kg	59
023	B-47(14')	Solid	Acetone	8260B	160		ug/kg	60
023	B-47(14')	Solid	1,1-Dichloroethene	8260B	2.2	J	ug/kg	60
023	B-47(14')	Solid	cis-1,2-Dichloroethene	8260B	28		ug/kg	60
023	B-47(14')	Solid	Styrene	8260B	190		ug/kg	60
023	B-47(14')	Solid	Trichloroethene	8260B	230	E	ug/kg	61
024	B-47(15')	Solid	Acetone	8260B	180		ug/kg	62
024	B-47(15')	Solid	1,1-Dichloroethene	8260B	2.0	J	ug/kg	62
024	B-47(15')	Solid	cis-1,2-Dichloroethene	8260B	26		ug/kg	62
024	B-47(15')	Solid	Styrene	8260B	160		ug/kg	62
024	B-47(15')	Solid	Trichloroethene	8260B	220	E	ug/kg	63
025	B-48(2')	Solid	Acetone	8260B	170		ug/kg	64
025	B-48(2')	Solid	2-Butanone (MEK)	8260B	4.3	J	ug/kg	64
025	B-48(2')	Solid	cis-1,2-Dichloroethene	8260B	2.6	J	ug/kg	64
025	B-48(2')	Solid	Styrene	8260B	49		ug/kg	64
025	B-48(2')	Solid	Toluene	8260B	1.8	J	ug/kg	64
025	B-48(2')	Solid	Xylenes (total)	8260B	3.9	J	ug/kg	65
026	B-48(4')	Solid	Acetone	8260B	290		ug/kg	66
026	B-48(4')	Solid	2-Butanone (MEK)	8260B	5.2	J	ug/kg	66
026	B-48(4')	Solid	Carbon disulfide	8260B	2.0	J	ug/kg	66
026	B-48(4')	Solid	cis-1,2-Dichloroethene	8260B	7.3		ug/kg	66
026	B-48(4')	Solid	Methylene chloride	8260B	12		ug/kg	66
026	B-48(4')	Solid	Styrene	8260B	300	E	ug/kg	66
027	B-48(6')	Solid	Acetone	8260B	190		ug/kg	68
027	B-48(6')	Solid	cis-1,2-Dichloroethene	8260B	14		ug/kg	68
027	B-48(6')	Solid	Methylene chloride	8260B	17		ug/kg	68
027	B-48(6')	Solid	Styrene	8260B	190		ug/kg	68
028	B-48(8')	Solid	Acetone	8260B	110		ug/kg	70
028	B-48(8')	Solid	cis-1,2-Dichloroethene	8260B	8.3		ug/kg	70
028	B-48(8')	Solid	Methylene chloride	8260B	7.8		ug/kg	70
028	B-48(8')	Solid	Styrene	8260B	91		ug/kg	70
029	B-48(10')	Solid	Acetone	8260B	360		ug/kg	72
029	B-48(10')	Solid	Methylene chloride	8260B	9.6		ug/kg	72
029	B-48(10')	Solid	Styrene	8260B	170		ug/kg	72

Detection Summary (Continued)

Lot Number: TC30002

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
029	B-48(10')	Solid	Trichloroethene	8260B	14		ug/kg	73
030	B-48(12')	Solid	Acetone	8260B	1200	E	ug/kg	74
030	B-48(12')	Solid	2-Butanone (MEK)	8260B	7.6	J	ug/kg	74
030	B-48(12')	Solid	Methylene chloride	8260B	12		ug/kg	74
030	B-48(12')	Solid	Styrene	8260B	200		ug/kg	74
030	B-48(12')	Solid	Trichloroethene	8260B	14		ug/kg	75
031	B-48(14')	Solid	Acetone	8260B	500		ug/kg	76
031	B-48(14')	Solid	2-Butanone (MEK)	8260B	7.5	J	ug/kg	76
031	B-48(14')	Solid	Methylene chloride	8260B	19		ug/kg	76
031	B-48(14')	Solid	Styrene	8260B	390	E	ug/kg	76
031	B-48(14')	Solid	Trichloroethene	8260B	23		ug/kg	77
032	B-48(15')	Solid	Acetone	8260B	240		ug/kg	78
032	B-48(15')	Solid	2-Butanone (MEK)	8260B	3.6	J	ug/kg	78
032	B-48(15')	Solid	cis-1,2-Dichloroethene	8260B	2.7	J	ug/kg	78
032	B-48(15')	Solid	Methylene chloride	8260B	11		ug/kg	78
032	B-48(15')	Solid	Styrene	8260B	170	E	ug/kg	78
032	B-48(15')	Solid	Trichloroethene	8260B	42		ug/kg	79
033	B-49(2')	Solid	Acetone	8260B	53		ug/kg	80
033	B-49(2')	Solid	2-Butanone (MEK)	8260B	5.1	J	ug/kg	80
033	B-49(2')	Solid	cis-1,2-Dichloroethene	8260B	57		ug/kg	80
033	B-49(2')	Solid	Styrene	8260B	110		ug/kg	80
033	B-49(2')	Solid	Trichloroethene	8260B	60		ug/kg	81
034	B-49(4')	Solid	Acetone	8260B	120		ug/kg	82
034	B-49(4')	Solid	1,1-Dichloroethene	8260B	3.3	J	ug/kg	82
034	B-49(4')	Solid	cis-1,2-Dichloroethene	8260B	470		ug/kg	82
034	B-49(4')	Solid	trans-1,2-Dichloroethene	8260B	2.9	J	ug/kg	82
034	B-49(4')	Solid	Ethylbenzene	8260B	13		ug/kg	82
034	B-49(4')	Solid	Styrene	8260B	130		ug/kg	82
034	B-49(4')	Solid	Tetrachloroethene	8260B	11		ug/kg	82
034	B-49(4')	Solid	Toluene	8260B	3.8	J	ug/kg	82
034	B-49(4')	Solid	Trichloroethene	8260B	920		ug/kg	83
034	B-49(4')	Solid	Xylenes (total)	8260B	47		ug/kg	83
035	B-49(6')	Solid	Acetone	8260B	320		ug/kg	84
035	B-49(6')	Solid	1,1-Dichloroethene	8260B	4.4	J	ug/kg	84
035	B-49(6')	Solid	cis-1,2-Dichloroethene	8260B	900		ug/kg	84
035	B-49(6')	Solid	trans-1,2-Dichloroethene	8260B	7.1		ug/kg	84
035	B-49(6')	Solid	Ethylbenzene	8260B	13		ug/kg	84
035	B-49(6')	Solid	Styrene	8260B	170		ug/kg	84
035	B-49(6')	Solid	Tetrachloroethene	8260B	7.1		ug/kg	84
035	B-49(6')	Solid	Toluene	8260B	5.1	J	ug/kg	84
035	B-49(6')	Solid	Trichloroethene	8260B	1400		ug/kg	85
035	B-49(6')	Solid	Xylenes (total)	8260B	40		ug/kg	85
036	B-49(8')	Solid	Acetone	8260B	180		ug/kg	86
036	B-49(8')	Solid	2-Butanone (MEK)	8260B	19		ug/kg	86
036	B-49(8')	Solid	1,1-Dichloroethene	8260B	2.9	J	ug/kg	86
036	B-49(8')	Solid	cis-1,2-Dichloroethene	8260B	210	E	ug/kg	86
036	B-49(8')	Solid	trans-1,2-Dichloroethene	8260B	18		ug/kg	86
036	B-49(8')	Solid	Methyl acetate	8260B	3.3	J	ug/kg	86

Detection Summary (Continued)

Lot Number: TC30002

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
036	B-49(8')	Solid	Styrene	8260B	130		ug/kg	86
036	B-49(8')	Solid	Trichloroethene	8260B	130		ug/kg	87
037	B-49(10')	Solid	Acetone	8260B	140		ug/kg	88
037	B-49(10')	Solid	cis-1,2-Dichloroethene	8260B	140		ug/kg	88
037	B-49(10')	Solid	trans-1,2-Dichloroethene	8260B	16		ug/kg	88
037	B-49(10')	Solid	Styrene	8260B	160		ug/kg	88
037	B-49(10')	Solid	Trichloroethene	8260B	96		ug/kg	89
038	B-49(12')	Solid	Acetone	8260B	260		ug/kg	90
038	B-49(12')	Solid	2-Butanone (MEK)	8260B	7.0	J	ug/kg	90
038	B-49(12')	Solid	cis-1,2-Dichloroethene	8260B	30		ug/kg	90
038	B-49(12')	Solid	Styrene	8260B	300		ug/kg	90
038	B-49(12')	Solid	Trichloroethene	8260B	15		ug/kg	91
039	B-49(14')	Solid	Acetone	8260B	190		ug/kg	92
039	B-49(14')	Solid	2-Butanone (MEK)	8260B	16	J	ug/kg	92
039	B-49(14')	Solid	1,1-Dichloroethene	8260B	3.4	J	ug/kg	92
039	B-49(14')	Solid	cis-1,2-Dichloroethene	8260B	200	E	ug/kg	92
039	B-49(14')	Solid	trans-1,2-Dichloroethene	8260B	22		ug/kg	92
039	B-49(14')	Solid	Methylene chloride	8260B	7.9		ug/kg	92
039	B-49(14')	Solid	Styrene	8260B	190		ug/kg	92
039	B-49(14')	Solid	Trichloroethene	8260B	150		ug/kg	93
040	B-49(15')	Solid	Acetone	8260B	130		ug/kg	94
040	B-49(15')	Solid	cis-1,2-Dichloroethene	8260B	160		ug/kg	94
040	B-49(15')	Solid	trans-1,2-Dichloroethene	8260B	13		ug/kg	94
040	B-49(15')	Solid	Styrene	8260B	190		ug/kg	94
040	B-49(15')	Solid	Trichloroethene	8260B	93		ug/kg	95
041	B-45(2')	Solid	Acetone	8260B	130		ug/kg	96
041	B-45(2')	Solid	Methylene chloride	8260B	8.4		ug/kg	96
041	B-45(2')	Solid	Styrene	8260B	540		ug/kg	96
042	B-45(4')	Solid	Acetone	8260B	330		ug/kg	98
042	B-45(4')	Solid	Methylene chloride	8260B	18		ug/kg	98
042	B-45(4')	Solid	Styrene	8260B	120		ug/kg	98
043	B-45(6')	Solid	Acetone	8260B	240		ug/kg	100
043	B-45(6')	Solid	2-Butanone (MEK)	8260B	5.3	J	ug/kg	100
043	B-45(6')	Solid	Methylene chloride	8260B	9.3		ug/kg	100
043	B-45(6')	Solid	Styrene	8260B	170		ug/kg	100
043	B-45(6')	Solid	Trichloroethene	8260B	18		ug/kg	101
044	B-45(8')	Solid	Acetone	8260B	100		ug/kg	102
044	B-45(8')	Solid	Methylene chloride	8260B	4.8	J	ug/kg	102
044	B-45(8')	Solid	Styrene	8260B	100		ug/kg	102
044	B-45(8')	Solid	Trichloroethene	8260B	14		ug/kg	103
045	B-45(10')	Solid	Acetone	8260B	86		ug/kg	104
045	B-45(10')	Solid	Styrene	8260B	170		ug/kg	104
045	B-45(10')	Solid	Trichloroethene	8260B	20		ug/kg	105
046	B-45(12')	Solid	Acetone	8260B	47		ug/kg	106
046	B-45(12')	Solid	Methylene chloride	8260B	5.4		ug/kg	106
046	B-45(12')	Solid	Styrene	8260B	130		ug/kg	106
046	B-45(12')	Solid	Trichloroethene	8260B	22		ug/kg	107
047	B-45(14')	Solid	Acetone	8260B	120		ug/kg	108

Detection Summary (Continued)**Lot Number: TC30002**

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
047	B-45(14')	Solid	Methylene chloride	8260B	8.2		ug/kg	108
047	B-45(14')	Solid	Styrene	8260B	240	E	ug/kg	108
047	B-45(14')	Solid	Trichloroethene	8260B	22		ug/kg	109
048	B-45(15')	Solid	Acetone	8260B	120		ug/kg	110
048	B-45(15')	Solid	Methylene chloride	8260B	8.3		ug/kg	110
048	B-45(15')	Solid	Styrene	8260B	160		ug/kg	110
048	B-45(15')	Solid	Trichloroethene	8260B	9.2		ug/kg	111

(196 detections)

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-001
Description: B-46(2')	Matrix: Solid
Date Sampled: 03/29/2018 1050	% Solids: 77.9 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	04/04/2018 1324	JM1		68708	5.61

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	5.8	J	23	4.6	ug/kg	2
Benzene	71-43-2	8260B	ND		5.7	2.3	ug/kg	2
Bromodichloromethane	75-27-4	8260B	ND		5.7	2.3	ug/kg	2
Bromoform	75-25-2	8260B	ND		5.7	2.3	ug/kg	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.7	2.3	ug/kg	2
2-Butanone (MEK)	78-93-3	8260B	ND		23	4.6	ug/kg	2
Carbon disulfide	75-15-0	8260B	ND		5.7	2.3	ug/kg	2
Carbon tetrachloride	56-23-5	8260B	ND		5.7	2.3	ug/kg	2
Chlorobenzene	108-90-7	8260B	ND		5.7	2.3	ug/kg	2
Chloroethane	75-00-3	8260B	ND		5.7	2.3	ug/kg	2
Chloroform	67-66-3	8260B	ND		5.7	2.3	ug/kg	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.7	2.3	ug/kg	2
Cyclohexane	110-82-7	8260B	ND		5.7	2.3	ug/kg	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.7	2.3	ug/kg	2
Dibromochloromethane	124-48-1	8260B	ND		5.7	2.3	ug/kg	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.7	2.3	ug/kg	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.7	2.3	ug/kg	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.7	2.3	ug/kg	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.7	2.3	ug/kg	2
Dichlorodifluoromethane	75-71-8	8260B	ND		5.7	2.3	ug/kg	2
1,1-Dichloroethane	75-34-3	8260B	ND		5.7	2.3	ug/kg	2
1,2-Dichloroethane	107-06-2	8260B	ND		5.7	2.3	ug/kg	2
1,1-Dichloroethene	75-35-4	8260B	ND		5.7	2.3	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.7	2.3	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.7	2.3	ug/kg	2
1,2-Dichloropropane	78-87-5	8260B	ND		5.7	2.3	ug/kg	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.7	2.3	ug/kg	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.7	2.3	ug/kg	2
Ethylbenzene	100-41-4	8260B	ND		5.7	2.3	ug/kg	2
2-Hexanone	591-78-6	8260B	ND		11	4.6	ug/kg	2
Isopropylbenzene	98-82-8	8260B	ND		5.7	2.3	ug/kg	2
Methyl acetate	79-20-9	8260B	ND		5.7	2.3	ug/kg	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.7	2.3	ug/kg	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	4.6	ug/kg	2
Methylcyclohexane	108-87-2	8260B	ND		5.7	2.3	ug/kg	2
Methylene chloride	75-09-2	8260B	ND		5.7	2.3	ug/kg	2
Styrene	100-42-5	8260B	ND		5.7	2.3	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.7	2.3	ug/kg	2
Tetrachloroethene	127-18-4	8260B	ND		5.7	2.3	ug/kg	2
Toluene	108-88-3	8260B	ND		5.7	2.3	ug/kg	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.7	2.3	ug/kg	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.7	2.3	ug/kg	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.7	2.3	ug/kg	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.7	2.3	ug/kg	2

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-001
Description: B-46(2')	Matrix: Solid
Date Sampled: 03/29/2018 1050	% Solids: 77.9 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	04/04/2018 1324	JM1		68708	5.61

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.7	2.3	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.7	2.3	ug/kg	2
Vinyl chloride	75-01-4	8260B	ND		5.7	2.3	ug/kg	2
Xylenes (total)	1330-20-7	8260B	ND		11	4.6	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	53-142
Bromofluorobenzene		111	47-138
Toluene-d8		112	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-002
Description: B-46(4')	Matrix: Solid
Date Sampled: 03/29/2018 1055	% Solids: 93.3 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035 High	8260B	1	04/03/2018 2055	JM1		68661	5.88

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		980	200	ug/kg	1
Benzene	71-43-2	8260B	ND		250	98	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		250	98	ug/kg	1
Bromoform	75-25-2	8260B	ND		250	98	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		250	98	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		980	200	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		250	98	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		250	98	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		250	98	ug/kg	1
Chloroethane	75-00-3	8260B	ND		250	98	ug/kg	1
Chloroform	67-66-3	8260B	ND		250	98	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		250	98	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		250	98	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		250	98	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		250	98	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		250	98	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		250	98	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		250	98	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		250	98	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		250	98	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		250	98	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		250	98	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		250	98	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		250	98	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		250	98	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		250	98	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		250	98	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		250	98	ug/kg	1
Ethylbenzene	100-41-4	8260B	4900		250	98	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		490	200	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		250	98	ug/kg	1
Methyl acetate	79-20-9	8260B	140	J	250	98	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		250	98	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		490	200	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		250	98	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		250	98	ug/kg	1
Styrene	100-42-5	8260B	ND		250	98	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		250	98	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		250	98	ug/kg	1
Toluene	108-88-3	8260B	ND		250	98	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		250	98	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		250	98	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		250	98	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		250	98	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-002
Description: B-46(4')	Matrix: Solid
Date Sampled: 03/29/2018 1055	% Solids: 93.3 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035 High	8260B	1	04/03/2018 2055	JM1		68661	5.88

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		250	98	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		250	98	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		250	98	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		490	200	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	53-142
Bromofluorobenzene		93	47-138
Toluene-d8		98	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-003
Description: B-46(6')	Matrix: Solid
Date Sampled: 03/29/2018 1100	% Solids: 79.8 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/03/2018 1731	JM1		68660	5.97

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	67		21	4.2	ug/kg	1
Benzene	71-43-2	8260B	ND		5.2	2.1	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.2	2.1	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.2	2.1	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.2	2.1	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		21	4.2	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.2	2.1	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.2	2.1	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.2	2.1	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.2	2.1	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.2	2.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.2	2.1	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.2	2.1	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.2	2.1	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.2	2.1	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.2	2.1	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.2	2.1	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.2	2.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.2	2.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.2	2.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.2	2.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.2	2.1	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.2	2.1	ug/kg	1
Ethylbenzene	100-41-4	8260B	14		5.2	2.1	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		10	4.2	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.2	2.1	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.2	2.1	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.2	2.1	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	4.2	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.2	2.1	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.2	2.1	ug/kg	1
Styrene	100-42-5	8260B	ND		5.2	2.1	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.2	2.1	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.2	2.1	ug/kg	1
Toluene	108-88-3	8260B	ND		5.2	2.1	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.2	2.1	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.2	2.1	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.2	2.1	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.2	2.1	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-003
Description: B-46(6')	Matrix: Solid
Date Sampled: 03/29/2018 1100	% Solids: 79.8 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/03/2018 1731	JM1		68660	5.97

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.2	2.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.2	2.1	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.2	2.1	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		10	4.2	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	53-142
Bromofluorobenzene		107	47-138
Toluene-d8		115	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-004
Description: B-46(8')	Matrix: Solid
Date Sampled: 03/29/2018 1100	% Solids: 80.7 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/03/2018 1753	JM1		68660	6.26

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	31		20	4.0	ug/kg	1
Benzene	71-43-2	8260B	ND		4.9	2.0	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.9	2.0	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.9	2.0	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.9	2.0	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		20	4.0	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.9	2.0	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.9	2.0	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.9	2.0	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.9	2.0	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.9	2.0	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.9	2.0	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.9	2.0	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.9	2.0	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.9	2.0	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.9	2.0	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.9	2.0	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.9	2.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.9	2.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.9	2.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.9	2.0	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.9	2.0	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.9	2.0	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.9	2.0	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.9	4.0	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.9	2.0	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.9	2.0	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.9	2.0	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.9	4.0	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.9	2.0	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.9	2.0	ug/kg	1
Styrene	100-42-5	8260B	ND		4.9	2.0	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.9	2.0	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.9	2.0	ug/kg	1
Toluene	108-88-3	8260B	ND		4.9	2.0	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.9	2.0	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.9	2.0	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.9	2.0	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.9	2.0	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-004
Description: B-46(8')	Matrix: Solid
Date Sampled: 03/29/2018 1100	% Solids: 80.7 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/03/2018 1753	JM1		68660	6.26

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.9	2.0	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.9	2.0	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.9	2.0	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.9	4.0	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	53-142
Bromofluorobenzene		108	47-138
Toluene-d8		112	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-005
Description: B-46(10')	Matrix: Solid
Date Sampled: 03/29/2018 1105	% Solids: 80.0 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/03/2018 1816	JM1		68660	6.28

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	4.0	ug/kg	1
Benzene	71-43-2	8260B	ND		5.0	2.0	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	2.0	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.0	2.0	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	2.0	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		20	4.0	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.0	2.0	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	2.0	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.0	2.0	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.0	2.0	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.0	2.0	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	2.0	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	2.0	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	2.0	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	2.0	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	2.0	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	2.0	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	2.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	2.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	2.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	2.0	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	2.0	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	2.0	ug/kg	1
Ethylbenzene	100-41-4	8260B	3.2	J	5.0	2.0	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.9	4.0	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	2.0	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.0	2.0	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	2.0	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.9	4.0	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	2.0	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.0	2.0	ug/kg	1
Styrene	100-42-5	8260B	ND		5.0	2.0	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	2.0	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	2.0	ug/kg	1
Toluene	108-88-3	8260B	ND		5.0	2.0	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	2.0	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	2.0	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	2.0	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	2.0	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-005
Description: B-46(10')	Matrix: Solid
Date Sampled: 03/29/2018 1105	% Solids: 80.0 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/03/2018 1816	JM1		68660	6.28

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	2.0	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	2.0	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.0	2.0	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.9	4.0	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	53-142
Bromofluorobenzene		109	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-006
Description: B-46(12')	Matrix: Solid
Date Sampled: 03/29/2018 1108	% Solids: 81.0 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/03/2018 1838	JM1		68660	6.50

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	12	J	19	3.8	ug/kg	1
Benzene	71-43-2	8260B	ND		4.7	1.9	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.7	1.9	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.7	1.9	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.7	1.9	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		19	3.8	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.7	1.9	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.7	1.9	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.7	1.9	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.7	1.9	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.7	1.9	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.7	1.9	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.7	1.9	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.7	1.9	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.7	1.9	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.7	1.9	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.7	1.9	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.7	1.9	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.7	1.9	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.7	1.9	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.7	1.9	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.7	1.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.7	1.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.7	1.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.7	1.9	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.7	1.9	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.7	1.9	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.7	1.9	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.7	1.9	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.5	3.8	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.7	1.9	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.7	1.9	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.7	1.9	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.5	3.8	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.7	1.9	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.7	1.9	ug/kg	1
Styrene	100-42-5	8260B	ND		4.7	1.9	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.7	1.9	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.7	1.9	ug/kg	1
Toluene	108-88-3	8260B	ND		4.7	1.9	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.7	1.9	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.7	1.9	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.7	1.9	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.7	1.9	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-006
Description: B-46(12')	Matrix: Solid
Date Sampled: 03/29/2018 1108	% Solids: 81.0 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/03/2018 1838	JM1		68660	6.50

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.7	1.9	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.7	1.9	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.7	1.9	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.5	3.8	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	53-142
Bromofluorobenzene		107	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-007
Description: B-46(14')	Matrix: Solid
Date Sampled: 03/29/2018 1112	% Solids: 84.8 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/03/2018 1948	JM1		68660	6.26

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		19	3.8	ug/kg	1
Benzene	71-43-2	8260B	ND		4.7	1.9	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.7	1.9	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.7	1.9	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.7	1.9	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		19	3.8	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.7	1.9	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.7	1.9	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.7	1.9	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.7	1.9	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.7	1.9	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.7	1.9	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.7	1.9	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.7	1.9	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.7	1.9	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.7	1.9	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.7	1.9	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.7	1.9	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.7	1.9	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.7	1.9	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.7	1.9	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.7	1.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.7	1.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.7	1.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.7	1.9	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.7	1.9	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.7	1.9	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.7	1.9	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.7	1.9	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.4	3.8	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.7	1.9	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.7	1.9	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.7	1.9	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.4	3.8	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.7	1.9	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.7	1.9	ug/kg	1
Styrene	100-42-5	8260B	ND		4.7	1.9	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.7	1.9	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.7	1.9	ug/kg	1
Toluene	108-88-3	8260B	ND		4.7	1.9	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.7	1.9	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.7	1.9	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.7	1.9	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.7	1.9	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-007
Description: B-46(14')	Matrix: Solid
Date Sampled: 03/29/2018 1112	% Solids: 84.8 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/03/2018 1948	JM1		68660	6.26

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.7	1.9	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.7	1.9	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.7	1.9	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.4	3.8	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		106	53-142
Bromofluorobenzene		111	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-008
Description: B-46(15')	Matrix: Solid
Date Sampled: 03/29/2018 1115	% Solids: 79.9 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0034	ECP		68671	6.14

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	4.1	ug/kg	1
Benzene	71-43-2	8260B	ND		5.1	2.0	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.1	2.0	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.1	2.0	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.1	2.0	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		20	4.1	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.1	2.0	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.1	2.0	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.1	2.0	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.1	2.0	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.1	2.0	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.1	2.0	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.1	2.0	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.1	2.0	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.1	2.0	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.1	2.0	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.1	2.0	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.1	2.0	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.1	2.0	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.1	2.0	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.1	2.0	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.1	2.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.1	2.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	3.5	J	5.1	2.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.1	2.0	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.1	2.0	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.1	2.0	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.1	2.0	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.1	2.0	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		10	4.1	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.1	2.0	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.1	2.0	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.1	2.0	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	4.1	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.1	2.0	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.1	2.0	ug/kg	1
Styrene	100-42-5	8260B	ND		5.1	2.0	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.1	2.0	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.1	2.0	ug/kg	1
Toluene	108-88-3	8260B	ND		5.1	2.0	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.1	2.0	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.1	2.0	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.1	2.0	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.1	2.0	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-008
Description: B-46(15')	Matrix: Solid
Date Sampled: 03/29/2018 1115	% Solids: 79.9 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0034	ECP		68671	6.14

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	4.2	J	5.1	2.0	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.1	2.0	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.1	2.0	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		10	4.1	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		105	53-142
Bromofluorobenzene		109	47-138
Toluene-d8		111	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-009
Description: B-50(2')	Matrix: Solid
Date Sampled: 03/29/2018 1123	% Solids: 82.8 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0056	ECP		68671	6.14

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	82		20	3.9	ug/kg	1
Benzene	71-43-2	8260B	ND		4.9	2.0	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.9	2.0	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.9	2.0	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.9	2.0	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		20	3.9	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.9	2.0	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.9	2.0	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.9	2.0	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.9	2.0	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.9	2.0	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.9	2.0	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.9	2.0	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.9	2.0	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.9	2.0	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.9	2.0	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.9	2.0	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.9	2.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.9	2.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.9	2.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.9	2.0	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.9	2.0	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.9	2.0	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.9	2.0	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.8	3.9	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.9	2.0	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.9	2.0	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.9	2.0	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.8	3.9	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.9	2.0	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.9	2.0	ug/kg	1
Styrene	100-42-5	8260B	37		4.9	2.0	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.9	2.0	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.9	2.0	ug/kg	1
Toluene	108-88-3	8260B	ND		4.9	2.0	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.9	2.0	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.9	2.0	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.9	2.0	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.9	2.0	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-009
Description: B-50(2')	Matrix: Solid
Date Sampled: 03/29/2018 1123	% Solids: 82.8 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0056	ECP		68671	6.14

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.9	2.0	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.9	2.0	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.9	2.0	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.8	3.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	53-142
Bromofluorobenzene		110	47-138
Toluene-d8		112	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-010
Description: B-50(4')	Matrix: Solid
Date Sampled: 03/29/2018 1125	% Solids: 82.8 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0118	ECP		68671	6.25

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	68		19	3.9	ug/kg	1
Benzene	71-43-2	8260B	ND		4.8	1.9	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.8	1.9	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.8	1.9	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.8	1.9	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	4.1	J	19	3.9	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.8	1.9	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.8	1.9	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.8	1.9	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.8	1.9	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.8	1.9	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.8	1.9	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.8	1.9	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.8	1.9	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.8	1.9	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.8	1.9	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.8	1.9	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.8	1.9	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.8	1.9	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.8	1.9	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.8	1.9	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.8	1.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.8	1.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.8	1.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.8	1.9	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.8	1.9	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.8	1.9	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.8	1.9	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.8	1.9	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.7	3.9	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.8	1.9	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.8	1.9	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.8	1.9	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.7	3.9	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.8	1.9	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.8	1.9	ug/kg	1
Styrene	100-42-5	8260B	12		4.8	1.9	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.8	1.9	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.8	1.9	ug/kg	1
Toluene	108-88-3	8260B	ND		4.8	1.9	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.8	1.9	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.8	1.9	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.8	1.9	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.8	1.9	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-010
Description: B-50(4')	Matrix: Solid
Date Sampled: 03/29/2018 1125	% Solids: 82.8 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0118	ECP		68671	6.25

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.8	1.9	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.8	1.9	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.8	1.9	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.7	3.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	53-142
Bromofluorobenzene		111	47-138
Toluene-d8		114	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-011
Description: B-50(6')	Matrix: Solid
Date Sampled: 03/29/2018 1130	% Solids: 77.2 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0140	ECP		68671	7.25

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	110		18	3.6	ug/kg	1
Benzene	71-43-2	8260B	ND		4.5	1.8	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.5	1.8	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.5	1.8	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.5	1.8	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	5.5	J	18	3.6	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.5	1.8	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.5	1.8	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.5	1.8	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.5	1.8	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.5	1.8	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.5	1.8	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.5	1.8	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.5	1.8	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.5	1.8	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.5	1.8	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.5	1.8	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.5	1.8	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.5	1.8	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.5	1.8	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.5	1.8	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.5	1.8	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.5	1.8	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.5	1.8	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.5	1.8	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.5	1.8	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.5	1.8	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.5	1.8	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.5	1.8	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		8.9	3.6	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.5	1.8	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.5	1.8	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.5	1.8	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		8.9	3.6	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.5	1.8	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.5	1.8	ug/kg	1
Styrene	100-42-5	8260B	33		4.5	1.8	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.5	1.8	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.5	1.8	ug/kg	1
Toluene	108-88-3	8260B	ND		4.5	1.8	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.5	1.8	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.5	1.8	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.5	1.8	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.5	1.8	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-011
Description: B-50(6')	Matrix: Solid
Date Sampled: 03/29/2018 1130	% Solids: 77.2 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0140	ECP		68671	7.25

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	5.9		4.5	1.8	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.5	1.8	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.5	1.8	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		8.9	3.6	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	53-142
Bromofluorobenzene		109	47-138
Toluene-d8		116	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-012
Description: B-50(8')	Matrix: Solid
Date Sampled: 03/29/2018 1130	% Solids: 80.7 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0202	ECP		68671	5.89

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	43		21	4.2	ug/kg	1
Benzene	71-43-2	8260B	ND		5.3	2.1	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.3	2.1	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.3	2.1	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.3	2.1	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		21	4.2	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.3	2.1	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.3	2.1	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.3	2.1	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.3	2.1	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.3	2.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.3	2.1	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.3	2.1	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.3	2.1	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.3	2.1	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.3	2.1	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.3	2.1	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.3	2.1	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.3	2.1	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.3	2.1	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.3	2.1	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.3	2.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.3	2.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.3	2.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.3	2.1	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.3	2.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.3	2.1	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.3	2.1	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.3	2.1	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		11	4.2	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.3	2.1	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.3	2.1	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.3	2.1	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	4.2	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.3	2.1	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.3	2.1	ug/kg	1
Styrene	100-42-5	8260B	63		5.3	2.1	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.3	2.1	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.3	2.1	ug/kg	1
Toluene	108-88-3	8260B	ND		5.3	2.1	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.3	2.1	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.3	2.1	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.3	2.1	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.3	2.1	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-012
Description: B-50(8')	Matrix: Solid
Date Sampled: 03/29/2018 1130	% Solids: 80.7 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0202	ECP		68671	5.89

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	3.9	J	5.3	2.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.3	2.1	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.3	2.1	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		11	4.2	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	53-142
Bromofluorobenzene		111	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-013
Description: B-50(10')	Matrix: Solid
Date Sampled: 03/29/2018 1135	% Solids: 80.0 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0224	ECP		68671	5.86

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	150		21	4.3	ug/kg	1
Benzene	71-43-2	8260B	ND		5.3	2.1	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.3	2.1	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.3	2.1	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.3	2.1	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		21	4.3	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.3	2.1	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.3	2.1	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.3	2.1	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.3	2.1	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.3	2.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.3	2.1	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.3	2.1	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.3	2.1	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.3	2.1	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.3	2.1	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.3	2.1	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.3	2.1	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.3	2.1	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.3	2.1	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.3	2.1	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.3	2.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.3	2.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.3	2.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.3	2.1	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.3	2.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.3	2.1	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.3	2.1	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.3	2.1	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		11	4.3	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.3	2.1	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.3	2.1	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.3	2.1	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	4.3	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.3	2.1	ug/kg	1
Methylene chloride	75-09-2	8260B	6.9		5.3	2.1	ug/kg	1
Styrene	100-42-5	8260B	280	E	5.3	2.1	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.3	2.1	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.3	2.1	ug/kg	1
Toluene	108-88-3	8260B	ND		5.3	2.1	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.3	2.1	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.3	2.1	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.3	2.1	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.3	2.1	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-013
Description: B-50(10')	Matrix: Solid
Date Sampled: 03/29/2018 1135	% Solids: 80.0 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0224	ECP		68671	5.86

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	5.1	J	5.3	2.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.3	2.1	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.3	2.1	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		11	4.3	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	53-142
Bromofluorobenzene		110	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-014
Description: B-50(12')	Matrix: Solid
Date Sampled: 03/29/2018 1138	% Solids: 79.4 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0246	ECP		68671	6.33

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	63		20	4.0	ug/kg	1
Benzene	71-43-2	8260B	ND		5.0	2.0	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	2.0	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.0	2.0	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	2.0	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		20	4.0	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.0	2.0	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	2.0	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.0	2.0	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.0	2.0	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.0	2.0	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	2.0	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	2.0	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	2.0	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	2.0	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	2.0	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	2.0	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	2.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	2.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	2.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	2.0	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	2.0	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	2.0	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.0	2.0	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		10	4.0	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	2.0	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.0	2.0	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	2.0	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	4.0	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	2.0	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.0	2.0	ug/kg	1
Styrene	100-42-5	8260B	110		5.0	2.0	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	2.0	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	2.0	ug/kg	1
Toluene	108-88-3	8260B	ND		5.0	2.0	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	2.0	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	2.0	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	2.0	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	2.0	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-014
Description: B-50(12')	Matrix: Solid
Date Sampled: 03/29/2018 1138	% Solids: 79.4 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0246	ECP		68671	6.33

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	10		5.0	2.0	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	2.0	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.0	2.0	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		10	4.0	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	53-142
Bromofluorobenzene		110	47-138
Toluene-d8		112	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-015
Description: B-50(14')	Matrix: Solid
Date Sampled: 03/29/2018 1144	% Solids: 79.3 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0308	ECP		68671	5.52

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	140		23	4.6	ug/kg	1
Benzene	71-43-2	8260B	ND		5.7	2.3	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.7	2.3	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.7	2.3	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.7	2.3	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		23	4.6	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.7	2.3	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.7	2.3	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.7	2.3	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.7	2.3	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.7	2.3	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.7	2.3	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.7	2.3	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.7	2.3	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.7	2.3	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.7	2.3	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.7	2.3	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.7	2.3	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.7	2.3	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.7	2.3	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.7	2.3	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.7	2.3	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.7	2.3	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.7	2.3	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.7	2.3	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.7	2.3	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.7	2.3	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.7	2.3	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.7	2.3	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		11	4.6	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.7	2.3	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.7	2.3	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.7	2.3	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	4.6	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.7	2.3	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.7	2.3	ug/kg	1
Styrene	100-42-5	8260B	140		5.7	2.3	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.7	2.3	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.7	2.3	ug/kg	1
Toluene	108-88-3	8260B	ND		5.7	2.3	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.7	2.3	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.7	2.3	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.7	2.3	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.7	2.3	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-015
Description: B-50(14')	Matrix: Solid
Date Sampled: 03/29/2018 1144	% Solids: 79.3 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0308	ECP		68671	5.52

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	8.7		5.7	2.3	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.7	2.3	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.7	2.3	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		11	4.6	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	53-142
Bromofluorobenzene		112	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-016
Description: B-50(15')	Matrix: Solid
Date Sampled: 03/29/2018 1153	% Solids: 81.5 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0331	ECP		68671	6.06

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	100		20	4.1	ug/kg	1
Benzene	71-43-2	8260B	ND		5.1	2.0	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.1	2.0	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.1	2.0	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.1	2.0	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		20	4.1	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.1	2.0	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.1	2.0	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.1	2.0	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.1	2.0	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.1	2.0	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.1	2.0	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.1	2.0	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.1	2.0	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.1	2.0	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.1	2.0	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.1	2.0	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.1	2.0	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.1	2.0	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.1	2.0	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.1	2.0	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.1	2.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.1	2.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.1	2.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.1	2.0	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.1	2.0	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.1	2.0	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.1	2.0	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.1	2.0	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		10	4.1	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.1	2.0	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.1	2.0	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.1	2.0	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	4.1	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.1	2.0	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.1	2.0	ug/kg	1
Styrene	100-42-5	8260B	180		5.1	2.0	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.1	2.0	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.1	2.0	ug/kg	1
Toluene	108-88-3	8260B	ND		5.1	2.0	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.1	2.0	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.1	2.0	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.1	2.0	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.1	2.0	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-016
Description: B-50(15')	Matrix: Solid
Date Sampled: 03/29/2018 1153	% Solids: 81.5 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0331	ECP		68671	6.06

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	2.5	J	5.1	2.0	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.1	2.0	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.1	2.0	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		10	4.1	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	53-142
Bromofluorobenzene		111	47-138
Toluene-d8		112	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-017
Description: B-47(2')	Matrix: Solid
Date Sampled: 03/29/2018 1358	% Solids: 80.8 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0353	ECP		68671	5.64

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	120		22	4.4	ug/kg	1
Benzene	71-43-2	8260B	ND		5.5	2.2	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.5	2.2	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.5	2.2	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.5	2.2	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		22	4.4	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.5	2.2	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.5	2.2	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.5	2.2	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.5	2.2	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.5	2.2	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.5	2.2	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.5	2.2	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.5	2.2	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.5	2.2	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.5	2.2	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.5	2.2	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.5	2.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.5	2.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.5	2.2	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.5	2.2	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.5	2.2	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.5	2.2	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.5	2.2	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		11	4.4	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.5	2.2	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.5	2.2	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.5	2.2	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	4.4	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.5	2.2	ug/kg	1
Methylene chloride	75-09-2	8260B	12		5.5	2.2	ug/kg	1
Styrene	100-42-5	8260B	170		5.5	2.2	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.5	2.2	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.5	2.2	ug/kg	1
Toluene	108-88-3	8260B	ND		5.5	2.2	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.5	2.2	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.5	2.2	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.5	2.2	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.5	2.2	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-017
Description: B-47(2')	Matrix: Solid
Date Sampled: 03/29/2018 1358	% Solids: 80.8 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0353	ECP		68671	5.64

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.5	2.2	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.5	2.2	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.5	2.2	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		11	4.4	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	53-142
Bromofluorobenzene		108	47-138
Toluene-d8		116	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-018
Description: B-47(4')	Matrix: Solid
Date Sampled: 03/29/2018 1400	% Solids: 81.7 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0415	ECP		68671	6.32

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	91		19	3.9	ug/kg	1
Benzene	71-43-2	8260B	ND		4.8	1.9	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.8	1.9	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.8	1.9	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.8	1.9	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		19	3.9	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.8	1.9	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.8	1.9	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.8	1.9	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.8	1.9	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.8	1.9	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.8	1.9	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.8	1.9	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.8	1.9	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.8	1.9	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.8	1.9	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.8	1.9	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.8	1.9	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.8	1.9	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.8	1.9	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.8	1.9	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.8	1.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.8	1.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.8	1.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.8	1.9	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.8	1.9	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.8	1.9	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.8	1.9	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.8	1.9	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.7	3.9	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.8	1.9	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.8	1.9	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.8	1.9	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.7	3.9	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.8	1.9	ug/kg	1
Methylene chloride	75-09-2	8260B	11		4.8	1.9	ug/kg	1
Styrene	100-42-5	8260B	120		4.8	1.9	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.8	1.9	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.8	1.9	ug/kg	1
Toluene	108-88-3	8260B	ND		4.8	1.9	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.8	1.9	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.8	1.9	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.8	1.9	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.8	1.9	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-018
Description: B-47(4')	Matrix: Solid
Date Sampled: 03/29/2018 1400	% Solids: 81.7 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0415	ECP		68671	6.32

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.8	1.9	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.8	1.9	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.8	1.9	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.7	3.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	53-142
Bromofluorobenzene		111	47-138
Toluene-d8		115	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-019
Description: B-47(6')	Matrix: Solid
Date Sampled: 03/29/2018 1405	% Solids: 80.9 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0438	ECP		68671	6.10

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	200		20	4.1	ug/kg	1
Benzene	71-43-2	8260B	ND		5.1	2.0	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.1	2.0	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.1	2.0	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.1	2.0	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		20	4.1	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.1	2.0	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.1	2.0	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.1	2.0	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.1	2.0	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.1	2.0	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.1	2.0	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.1	2.0	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.1	2.0	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.1	2.0	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.1	2.0	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.1	2.0	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.1	2.0	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.1	2.0	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.1	2.0	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.1	2.0	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.1	2.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.1	2.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	5.2		5.1	2.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.1	2.0	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.1	2.0	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.1	2.0	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.1	2.0	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.1	2.0	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		10	4.1	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.1	2.0	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.1	2.0	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.1	2.0	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	4.1	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.1	2.0	ug/kg	1
Methylene chloride	75-09-2	8260B	14		5.1	2.0	ug/kg	1
Styrene	100-42-5	8260B	120		5.1	2.0	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.1	2.0	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.1	2.0	ug/kg	1
Toluene	108-88-3	8260B	ND		5.1	2.0	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.1	2.0	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.1	2.0	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.1	2.0	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.1	2.0	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-019
Description: B-47(6')	Matrix: Solid
Date Sampled: 03/29/2018 1405	% Solids: 80.9 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0438	ECP		68671	6.10

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	4.1	J	5.1	2.0	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.1	2.0	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.1	2.0	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		10	4.1	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		106	53-142
Bromofluorobenzene		111	47-138
Toluene-d8		112	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-020
Description: B-47(8')	Matrix: Solid
Date Sampled: 03/29/2018 1407	% Solids: 76.1 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0500	ECP		68671	6.37

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	140		21	4.1	ug/kg	1
Benzene	71-43-2	8260B	ND		5.2	2.1	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.2	2.1	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.2	2.1	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.2	2.1	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		21	4.1	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.2	2.1	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.2	2.1	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.2	2.1	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.2	2.1	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.2	2.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.2	2.1	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.2	2.1	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.2	2.1	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.2	2.1	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.2	2.1	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.2	2.1	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.2	2.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.2	2.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	16		5.2	2.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.2	2.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.2	2.1	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.2	2.1	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.2	2.1	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		10	4.1	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.2	2.1	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.2	2.1	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.2	2.1	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	4.1	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.2	2.1	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.2	2.1	ug/kg	1
Styrene	100-42-5	8260B	110		5.2	2.1	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.2	2.1	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.2	2.1	ug/kg	1
Toluene	108-88-3	8260B	ND		5.2	2.1	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.2	2.1	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.2	2.1	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.2	2.1	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.2	2.1	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-020
Description: B-47(8')	Matrix: Solid
Date Sampled: 03/29/2018 1407	% Solids: 76.1 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0500	ECP		68671	6.37

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	12		5.2	2.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.2	2.1	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.2	2.1	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		10	4.1	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	53-142
Bromofluorobenzene		111	47-138
Toluene-d8		115	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-021
Description: B-47(10')	Matrix: Solid
Date Sampled: 03/29/2018 1410	% Solids: 78.2 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0523	ECP		68671	3.72

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	280		34	6.9	ug/kg	1
Benzene	71-43-2	8260B	ND		8.6	3.4	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		8.6	3.4	ug/kg	1
Bromoform	75-25-2	8260B	ND		8.6	3.4	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		8.6	3.4	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		34	6.9	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		8.6	3.4	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		8.6	3.4	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		8.6	3.4	ug/kg	1
Chloroethane	75-00-3	8260B	ND		8.6	3.4	ug/kg	1
Chloroform	67-66-3	8260B	ND		8.6	3.4	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		8.6	3.4	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		8.6	3.4	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		8.6	3.4	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		8.6	3.4	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		8.6	3.4	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		8.6	3.4	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		8.6	3.4	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		8.6	3.4	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		8.6	3.4	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		8.6	3.4	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		8.6	3.4	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		8.6	3.4	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	23		8.6	3.4	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		8.6	3.4	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		8.6	3.4	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		8.6	3.4	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		8.6	3.4	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		8.6	3.4	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		17	6.9	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		8.6	3.4	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		8.6	3.4	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		8.6	3.4	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		17	6.9	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		8.6	3.4	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		8.6	3.4	ug/kg	1
Styrene	100-42-5	8260B	280		8.6	3.4	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		8.6	3.4	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		8.6	3.4	ug/kg	1
Toluene	108-88-3	8260B	ND		8.6	3.4	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		8.6	3.4	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		8.6	3.4	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		8.6	3.4	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		8.6	3.4	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-021
Description: B-47(10')	Matrix: Solid
Date Sampled: 03/29/2018 1410	% Solids: 78.2 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0523	ECP		68671	3.72

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	180		8.6	3.4	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		8.6	3.4	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		8.6	3.4	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		17	6.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		105	53-142
Bromofluorobenzene		112	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-022
Description: B-47(12')	Matrix: Solid
Date Sampled: 03/29/2018 1412	% Solids: 81.3 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0545	ECP		68671	6.65
2	5035 High	8260B	1	04/05/2018 1908	JM1		68864	4.37

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	190		18	3.7	ug/kg	1
Benzene	71-43-2	8260B	ND		4.6	1.8	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.6	1.8	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.6	1.8	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.6	1.8	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		18	3.7	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.6	1.8	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.6	1.8	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.6	1.8	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.6	1.8	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.6	1.8	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.6	1.8	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.6	1.8	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.6	1.8	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.6	1.8	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.6	1.8	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.6	1.8	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.6	1.8	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.6	1.8	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.6	1.8	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.6	1.8	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.6	1.8	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	2.7	J	4.6	1.8	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	29		4.6	1.8	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.6	1.8	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.6	1.8	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.6	1.8	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.6	1.8	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.6	1.8	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.2	3.7	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.6	1.8	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.6	1.8	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.6	1.8	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.2	3.7	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.6	1.8	ug/kg	1
Methylene chloride	75-09-2	8260B	8.6		4.6	1.8	ug/kg	1
Styrene	100-42-5	8260B	450		410	160	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.6	1.8	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.6	1.8	ug/kg	1
Toluene	108-88-3	8260B	ND		4.6	1.8	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.6	1.8	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.6	1.8	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.6	1.8	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-022
Description: B-47(12')	Matrix: Solid
Date Sampled: 03/29/2018 1412	% Solids: 81.3 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0545	ECP		68671	6.65
2	5035 High	8260B	1	04/05/2018 1908	JM1		68864	4.37

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.6	1.8	ug/kg	1
Trichloroethene	79-01-6	8260B	580		410	160	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		4.6	1.8	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.6	1.8	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.2	3.7	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	53-142	N	166	53-142
Bromofluorobenzene		112	47-138	N	167	47-138
Toluene-d8		114	68-124	N	164	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-023
Description: B-47(14')	Matrix: Solid
Date Sampled: 03/29/2018 1413	% Solids: 80.5 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0608	ECP		68671	6.25

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	160		20	4.0	ug/kg	1
Benzene	71-43-2	8260B	ND		5.0	2.0	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	2.0	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.0	2.0	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	2.0	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		20	4.0	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.0	2.0	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	2.0	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.0	2.0	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.0	2.0	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.0	2.0	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	2.0	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	2.0	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	2.0	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	2.0	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	2.0	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	2.0	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	2.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	2.2	J	5.0	2.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	28		5.0	2.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	2.0	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	2.0	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	2.0	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.0	2.0	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.9	4.0	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	2.0	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.0	2.0	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	2.0	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.9	4.0	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	2.0	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.0	2.0	ug/kg	1
Styrene	100-42-5	8260B	190		5.0	2.0	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	2.0	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	2.0	ug/kg	1
Toluene	108-88-3	8260B	ND		5.0	2.0	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	2.0	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	2.0	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	2.0	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	2.0	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
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 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-023
Description: B-47(14')	Matrix: Solid
Date Sampled: 03/29/2018 1413	% Solids: 80.5 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0608	ECP		68671	6.25

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	230	E	5.0	2.0	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	2.0	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.0	2.0	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.9	4.0	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	53-142
Bromofluorobenzene		112	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-024
Description: B-47(15')	Matrix: Solid
Date Sampled: 03/29/2018 1415	% Solids: 83.3 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0630	ECP		68671	6.39

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	180		19	3.8	ug/kg	1
Benzene	71-43-2	8260B	ND		4.7	1.9	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.7	1.9	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.7	1.9	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.7	1.9	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		19	3.8	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.7	1.9	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.7	1.9	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.7	1.9	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.7	1.9	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.7	1.9	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.7	1.9	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.7	1.9	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.7	1.9	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.7	1.9	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.7	1.9	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.7	1.9	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.7	1.9	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.7	1.9	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.7	1.9	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.7	1.9	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.7	1.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	2.0	J	4.7	1.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	26		4.7	1.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.7	1.9	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.7	1.9	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.7	1.9	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.7	1.9	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.7	1.9	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.4	3.8	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.7	1.9	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.7	1.9	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.7	1.9	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.4	3.8	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.7	1.9	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.7	1.9	ug/kg	1
Styrene	100-42-5	8260B	160		4.7	1.9	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.7	1.9	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.7	1.9	ug/kg	1
Toluene	108-88-3	8260B	ND		4.7	1.9	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.7	1.9	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.7	1.9	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.7	1.9	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.7	1.9	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-024
Description: B-47(15')	Matrix: Solid
Date Sampled: 03/29/2018 1415	% Solids: 83.3 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0630	ECP		68671	6.39

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	220	E	4.7	1.9	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.7	1.9	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.7	1.9	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.4	3.8	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	53-142
Bromofluorobenzene		110	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-025
Description: B-48(2')	Matrix: Solid
Date Sampled: 03/29/2018 1422	% Solids: 85.2 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0653	ECP		68671	7.47

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	170		16	3.1	ug/kg	1
Benzene	71-43-2	8260B	ND		3.9	1.6	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		3.9	1.6	ug/kg	1
Bromoform	75-25-2	8260B	ND		3.9	1.6	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		3.9	1.6	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	4.3	J	16	3.1	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		3.9	1.6	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		3.9	1.6	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		3.9	1.6	ug/kg	1
Chloroethane	75-00-3	8260B	ND		3.9	1.6	ug/kg	1
Chloroform	67-66-3	8260B	ND		3.9	1.6	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		3.9	1.6	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		3.9	1.6	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		3.9	1.6	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		3.9	1.6	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		3.9	1.6	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		3.9	1.6	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		3.9	1.6	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		3.9	1.6	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		3.9	1.6	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		3.9	1.6	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		3.9	1.6	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		3.9	1.6	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	2.6	J	3.9	1.6	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		3.9	1.6	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		3.9	1.6	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		3.9	1.6	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		3.9	1.6	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		3.9	1.6	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		7.9	3.1	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		3.9	1.6	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		3.9	1.6	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		3.9	1.6	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		7.9	3.1	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		3.9	1.6	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		3.9	1.6	ug/kg	1
Styrene	100-42-5	8260B	49		3.9	1.6	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		3.9	1.6	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		3.9	1.6	ug/kg	1
Toluene	108-88-3	8260B	1.8	J	3.9	1.6	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		3.9	1.6	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		3.9	1.6	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		3.9	1.6	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		3.9	1.6	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-025
Description: B-48(2')	Matrix: Solid
Date Sampled: 03/29/2018 1422	% Solids: 85.2 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0653	ECP		68671	7.47

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		3.9	1.6	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		3.9	1.6	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		3.9	1.6	ug/kg	1
Xylenes (total)	1330-20-7	8260B	3.9	J	7.9	3.1	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		113	53-142
Bromofluorobenzene		109	47-138
Toluene-d8		114	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-026
Description: B-48(4')	Matrix: Solid
Date Sampled: 03/29/2018 1420	% Solids: 80.7 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0715	ECP		68671	6.30

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	290		20	3.9	ug/kg	1
Benzene	71-43-2	8260B	ND		4.9	2.0	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.9	2.0	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.9	2.0	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.9	2.0	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	5.2	J	20	3.9	ug/kg	1
Carbon disulfide	75-15-0	8260B	2.0	J	4.9	2.0	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.9	2.0	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.9	2.0	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.9	2.0	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.9	2.0	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.9	2.0	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.9	2.0	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.9	2.0	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.9	2.0	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.9	2.0	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.9	2.0	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.9	2.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.9	2.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	7.3		4.9	2.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.9	2.0	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.9	2.0	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.9	2.0	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.9	2.0	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.8	3.9	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.9	2.0	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.9	2.0	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.9	2.0	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.8	3.9	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.9	2.0	ug/kg	1
Methylene chloride	75-09-2	8260B	12		4.9	2.0	ug/kg	1
Styrene	100-42-5	8260B	300	E	4.9	2.0	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.9	2.0	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.9	2.0	ug/kg	1
Toluene	108-88-3	8260B	ND		4.9	2.0	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.9	2.0	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.9	2.0	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.9	2.0	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.9	2.0	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-026
Description: B-48(4')	Matrix: Solid
Date Sampled: 03/29/2018 1420	% Solids: 80.7 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 0715	ECP		68671	6.30

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.9	2.0	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.9	2.0	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.9	2.0	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.8	3.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		105	53-142
Bromofluorobenzene		112	47-138
Toluene-d8		111	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-027
Description: B-48(6')	Matrix: Solid
Date Sampled: 03/29/2018 1425	% Solids: 69.4 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1347	JM1		68708	5.06

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	190		28	5.7	ug/kg	1
Benzene	71-43-2	8260B	ND		7.1	2.8	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		7.1	2.8	ug/kg	1
Bromoform	75-25-2	8260B	ND		7.1	2.8	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		7.1	2.8	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		28	5.7	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		7.1	2.8	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		7.1	2.8	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		7.1	2.8	ug/kg	1
Chloroethane	75-00-3	8260B	ND		7.1	2.8	ug/kg	1
Chloroform	67-66-3	8260B	ND		7.1	2.8	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		7.1	2.8	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		7.1	2.8	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		7.1	2.8	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		7.1	2.8	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		7.1	2.8	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		7.1	2.8	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		7.1	2.8	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		7.1	2.8	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		7.1	2.8	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		7.1	2.8	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		7.1	2.8	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		7.1	2.8	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	14		7.1	2.8	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		7.1	2.8	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		7.1	2.8	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		7.1	2.8	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		7.1	2.8	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		7.1	2.8	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		14	5.7	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		7.1	2.8	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		7.1	2.8	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		7.1	2.8	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		14	5.7	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		7.1	2.8	ug/kg	1
Methylene chloride	75-09-2	8260B	17		7.1	2.8	ug/kg	1
Styrene	100-42-5	8260B	190		7.1	2.8	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		7.1	2.8	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		7.1	2.8	ug/kg	1
Toluene	108-88-3	8260B	ND		7.1	2.8	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		7.1	2.8	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		7.1	2.8	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		7.1	2.8	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		7.1	2.8	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-027
Description: B-48(6')	Matrix: Solid
Date Sampled: 03/29/2018 1425	% Solids: 69.4 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1347	JM1		68708	5.06

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		7.1	2.8	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		7.1	2.8	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		7.1	2.8	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		14	5.7	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	53-142
Bromofluorobenzene		108	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-028
Description: B-48(8')	Matrix: Solid
Date Sampled: 03/29/2018 1427	% Solids: 93.3 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1409	JM1		68708	7.09

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	110		15	3.0	ug/kg	1
Benzene	71-43-2	8260B	ND		3.8	1.5	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		3.8	1.5	ug/kg	1
Bromoform	75-25-2	8260B	ND		3.8	1.5	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		3.8	1.5	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		15	3.0	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		3.8	1.5	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		3.8	1.5	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		3.8	1.5	ug/kg	1
Chloroethane	75-00-3	8260B	ND		3.8	1.5	ug/kg	1
Chloroform	67-66-3	8260B	ND		3.8	1.5	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		3.8	1.5	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		3.8	1.5	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		3.8	1.5	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		3.8	1.5	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		3.8	1.5	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		3.8	1.5	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		3.8	1.5	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		3.8	1.5	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		3.8	1.5	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		3.8	1.5	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		3.8	1.5	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		3.8	1.5	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	8.3		3.8	1.5	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		3.8	1.5	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		3.8	1.5	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		3.8	1.5	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		3.8	1.5	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		3.8	1.5	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		7.6	3.0	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		3.8	1.5	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		3.8	1.5	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		3.8	1.5	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		7.6	3.0	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		3.8	1.5	ug/kg	1
Methylene chloride	75-09-2	8260B	7.8		3.8	1.5	ug/kg	1
Styrene	100-42-5	8260B	91		3.8	1.5	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		3.8	1.5	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		3.8	1.5	ug/kg	1
Toluene	108-88-3	8260B	ND		3.8	1.5	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		3.8	1.5	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		3.8	1.5	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		3.8	1.5	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		3.8	1.5	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-028
Description: B-48(8')	Matrix: Solid
Date Sampled: 03/29/2018 1427	% Solids: 93.3 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1409	JM1		68708	7.09

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		3.8	1.5	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		3.8	1.5	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		3.8	1.5	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		7.6	3.0	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	53-142
Bromofluorobenzene		104	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-029
Description: B-48(10')	Matrix: Solid
Date Sampled: 03/29/2018 1430	% Solids: 79.0 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1432	JM1		68708	6.14

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	360		21	4.1	ug/kg	1
Benzene	71-43-2	8260B	ND		5.2	2.1	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.2	2.1	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.2	2.1	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.2	2.1	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		21	4.1	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.2	2.1	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.2	2.1	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.2	2.1	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.2	2.1	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.2	2.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.2	2.1	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.2	2.1	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.2	2.1	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.2	2.1	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.2	2.1	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.2	2.1	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.2	2.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.2	2.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.2	2.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.2	2.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.2	2.1	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.2	2.1	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.2	2.1	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		10	4.1	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.2	2.1	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.2	2.1	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.2	2.1	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	4.1	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.2	2.1	ug/kg	1
Methylene chloride	75-09-2	8260B	9.6		5.2	2.1	ug/kg	1
Styrene	100-42-5	8260B	170		5.2	2.1	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.2	2.1	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.2	2.1	ug/kg	1
Toluene	108-88-3	8260B	ND		5.2	2.1	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.2	2.1	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.2	2.1	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.2	2.1	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.2	2.1	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-029
Description: B-48(10')	Matrix: Solid
Date Sampled: 03/29/2018 1430	% Solids: 79.0 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1432	JM1		68708	6.14

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	14		5.2	2.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.2	2.1	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.2	2.1	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		10	4.1	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	53-142
Bromofluorobenzene		109	47-138
Toluene-d8		119	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-030
Description: B-48(12')	Matrix: Solid
Date Sampled: 03/29/2018 1431	% Solids: 78.9 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1454	JM1		68708	5.74

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	1200	E	22	4.4	ug/kg	1
Benzene	71-43-2	8260B	ND		5.5	2.2	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.5	2.2	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.5	2.2	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.5	2.2	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	7.6	J	22	4.4	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.5	2.2	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.5	2.2	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.5	2.2	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.5	2.2	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.5	2.2	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.5	2.2	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.5	2.2	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.5	2.2	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.5	2.2	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.5	2.2	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.5	2.2	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.5	2.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.5	2.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.5	2.2	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.5	2.2	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.5	2.2	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.5	2.2	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.5	2.2	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		11	4.4	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.5	2.2	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.5	2.2	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.5	2.2	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	4.4	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.5	2.2	ug/kg	1
Methylene chloride	75-09-2	8260B	12		5.5	2.2	ug/kg	1
Styrene	100-42-5	8260B	200		5.5	2.2	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.5	2.2	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.5	2.2	ug/kg	1
Toluene	108-88-3	8260B	ND		5.5	2.2	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.5	2.2	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.5	2.2	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.5	2.2	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.5	2.2	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-030
Description: B-48(12')	Matrix: Solid
Date Sampled: 03/29/2018 1431	% Solids: 78.9 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1454	JM1		68708	5.74

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	14		5.5	2.2	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.5	2.2	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.5	2.2	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		11	4.4	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		108	53-142
Bromofluorobenzene		109	47-138
Toluene-d8		115	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-031
Description: B-48(14')	Matrix: Solid
Date Sampled: 03/29/2018 1434	% Solids: 81.0 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1516	JM1		68708	4.87

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	500		25	5.1	ug/kg	1
Benzene	71-43-2	8260B	ND		6.3	2.5	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		6.3	2.5	ug/kg	1
Bromoform	75-25-2	8260B	ND		6.3	2.5	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.3	2.5	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	7.5	J	25	5.1	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		6.3	2.5	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		6.3	2.5	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		6.3	2.5	ug/kg	1
Chloroethane	75-00-3	8260B	ND		6.3	2.5	ug/kg	1
Chloroform	67-66-3	8260B	ND		6.3	2.5	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.3	2.5	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		6.3	2.5	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.3	2.5	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		6.3	2.5	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.3	2.5	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.3	2.5	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.3	2.5	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.3	2.5	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		6.3	2.5	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		6.3	2.5	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		6.3	2.5	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		6.3	2.5	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.3	2.5	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.3	2.5	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		6.3	2.5	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.3	2.5	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.3	2.5	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		6.3	2.5	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		13	5.1	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		6.3	2.5	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		6.3	2.5	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.3	2.5	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		13	5.1	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		6.3	2.5	ug/kg	1
Methylene chloride	75-09-2	8260B	19		6.3	2.5	ug/kg	1
Styrene	100-42-5	8260B	390	E	6.3	2.5	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.3	2.5	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		6.3	2.5	ug/kg	1
Toluene	108-88-3	8260B	ND		6.3	2.5	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.3	2.5	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.3	2.5	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.3	2.5	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.3	2.5	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-031
Description: B-48(14')	Matrix: Solid
Date Sampled: 03/29/2018 1434	% Solids: 81.0 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1516	JM1		68708	4.87

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	23		6.3	2.5	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		6.3	2.5	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		6.3	2.5	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		13	5.1	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	53-142
Bromofluorobenzene		109	47-138
Toluene-d8		115	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-032
Description: B-48(15')	Matrix: Solid
Date Sampled: 03/29/2018 1436	% Solids: 87.6 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	04/06/2018 1207	JM1		68915	6.57

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	240		17	3.5	ug/kg	2
Benzene	71-43-2	8260B	ND		4.3	1.7	ug/kg	2
Bromodichloromethane	75-27-4	8260B	ND		4.3	1.7	ug/kg	2
Bromoform	75-25-2	8260B	ND		4.3	1.7	ug/kg	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.3	1.7	ug/kg	2
2-Butanone (MEK)	78-93-3	8260B	3.6	J	17	3.5	ug/kg	2
Carbon disulfide	75-15-0	8260B	ND		4.3	1.7	ug/kg	2
Carbon tetrachloride	56-23-5	8260B	ND		4.3	1.7	ug/kg	2
Chlorobenzene	108-90-7	8260B	ND		4.3	1.7	ug/kg	2
Chloroethane	75-00-3	8260B	ND		4.3	1.7	ug/kg	2
Chloroform	67-66-3	8260B	ND		4.3	1.7	ug/kg	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.3	1.7	ug/kg	2
Cyclohexane	110-82-7	8260B	ND		4.3	1.7	ug/kg	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.3	1.7	ug/kg	2
Dibromochloromethane	124-48-1	8260B	ND		4.3	1.7	ug/kg	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.3	1.7	ug/kg	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.3	1.7	ug/kg	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.3	1.7	ug/kg	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.3	1.7	ug/kg	2
Dichlorodifluoromethane	75-71-8	8260B	ND		4.3	1.7	ug/kg	2
1,1-Dichloroethane	75-34-3	8260B	ND		4.3	1.7	ug/kg	2
1,2-Dichloroethane	107-06-2	8260B	ND		4.3	1.7	ug/kg	2
1,1-Dichloroethene	75-35-4	8260B	ND		4.3	1.7	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260B	2.7	J	4.3	1.7	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.3	1.7	ug/kg	2
1,2-Dichloropropane	78-87-5	8260B	ND		4.3	1.7	ug/kg	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.3	1.7	ug/kg	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.3	1.7	ug/kg	2
Ethylbenzene	100-41-4	8260B	ND		4.3	1.7	ug/kg	2
2-Hexanone	591-78-6	8260B	ND		8.7	3.5	ug/kg	2
Isopropylbenzene	98-82-8	8260B	ND		4.3	1.7	ug/kg	2
Methyl acetate	79-20-9	8260B	ND		4.3	1.7	ug/kg	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.3	1.7	ug/kg	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		8.7	3.5	ug/kg	2
Methylcyclohexane	108-87-2	8260B	ND		4.3	1.7	ug/kg	2
Methylene chloride	75-09-2	8260B	11		4.3	1.7	ug/kg	2
Styrene	100-42-5	8260B	170	E	4.3	1.7	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.3	1.7	ug/kg	2
Tetrachloroethene	127-18-4	8260B	ND		4.3	1.7	ug/kg	2
Toluene	108-88-3	8260B	ND		4.3	1.7	ug/kg	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.3	1.7	ug/kg	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.3	1.7	ug/kg	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.3	1.7	ug/kg	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.3	1.7	ug/kg	2

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-032
Description: B-48(15')	Matrix: Solid
Date Sampled: 03/29/2018 1436	% Solids: 87.6 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	04/06/2018 1207	JM1		68915	6.57

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	42		4.3	1.7	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		4.3	1.7	ug/kg	2
Vinyl chloride	75-01-4	8260B	ND		4.3	1.7	ug/kg	2
Xylenes (total)	1330-20-7	8260B	ND		8.7	3.5	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	53-142
Bromofluorobenzene		112	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-033
Description: B-49(2')	Matrix: Solid
Date Sampled: 03/29/2018 1445	% Solids: 83.4 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1601	JM1		68708	6.61

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	53		18	3.6	ug/kg	1
Benzene	71-43-2	8260B	ND		4.5	1.8	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.5	1.8	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.5	1.8	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.5	1.8	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	5.1	J	18	3.6	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.5	1.8	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.5	1.8	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.5	1.8	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.5	1.8	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.5	1.8	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.5	1.8	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.5	1.8	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.5	1.8	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.5	1.8	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.5	1.8	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.5	1.8	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.5	1.8	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.5	1.8	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.5	1.8	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.5	1.8	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.5	1.8	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.5	1.8	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	57		4.5	1.8	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.5	1.8	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.5	1.8	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.5	1.8	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.5	1.8	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.5	1.8	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.1	3.6	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.5	1.8	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.5	1.8	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.5	1.8	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.1	3.6	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.5	1.8	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.5	1.8	ug/kg	1
Styrene	100-42-5	8260B	110		4.5	1.8	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.5	1.8	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.5	1.8	ug/kg	1
Toluene	108-88-3	8260B	ND		4.5	1.8	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.5	1.8	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.5	1.8	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.5	1.8	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.5	1.8	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-033
Description: B-49(2')	Matrix: Solid
Date Sampled: 03/29/2018 1445	% Solids: 83.4 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1601	JM1		68708	6.61

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	60		4.5	1.8	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.5	1.8	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.5	1.8	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.1	3.6	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		105	53-142
Bromofluorobenzene		117	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-034
Description: B-49(4')	Matrix: Solid
Date Sampled: 03/29/2018 1446	% Solids: 80.3 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1624	JM1		68708	6.31
2	5035 High	8260B	1	04/06/2018 1618	JM1		68933	6.76

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	120		20	3.9	ug/kg	1
Benzene	71-43-2	8260B	ND		4.9	2.0	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.9	2.0	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.9	2.0	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.9	2.0	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		20	3.9	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.9	2.0	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.9	2.0	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.9	2.0	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.9	2.0	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.9	2.0	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.9	2.0	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.9	2.0	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.9	2.0	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.9	2.0	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.9	2.0	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.9	2.0	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.9	2.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	3.3	J	4.9	2.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	470		290	120	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260B	2.9	J	4.9	2.0	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.9	2.0	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.9	2.0	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.9	2.0	ug/kg	1
Ethylbenzene	100-41-4	8260B	13		4.9	2.0	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.9	3.9	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.9	2.0	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.9	2.0	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.9	2.0	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.9	3.9	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.9	2.0	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.9	2.0	ug/kg	1
Styrene	100-42-5	8260B	130		4.9	2.0	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.9	2.0	ug/kg	1
Tetrachloroethene	127-18-4	8260B	11		4.9	2.0	ug/kg	1
Toluene	108-88-3	8260B	3.8	J	4.9	2.0	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.9	2.0	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.9	2.0	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.9	2.0	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-034
Description: B-49(4')	Matrix: Solid
Date Sampled: 03/29/2018 1446	% Solids: 80.3 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1624	JM1		68708	6.31
2	5035 High	8260B	1	04/06/2018 1618	JM1		68933	6.76

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.9	2.0	ug/kg	1
Trichloroethene	79-01-6	8260B	920		290	120	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		4.9	2.0	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.9	2.0	ug/kg	1
Xylenes (total)	1330-20-7	8260B	47		9.9	3.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	53-142		109	53-142
Bromofluorobenzene		107	47-138		109	47-138
Toluene-d8		115	68-124		110	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-035
Description: B-49(6')	Matrix: Solid
Date Sampled: 03/29/2018 1448	% Solids: 78.8 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1646	JM1		68708	5.87
2	5035 High	8260B	1	04/06/2018 1641	JM1		68933	6.41

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	320		22	4.3	ug/kg	1
Benzene	71-43-2	8260B	ND		5.4	2.2	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.4	2.2	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.4	2.2	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.4	2.2	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		22	4.3	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.4	2.2	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.4	2.2	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.4	2.2	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.4	2.2	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.4	2.2	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.4	2.2	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.4	2.2	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.4	2.2	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.4	2.2	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.4	2.2	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.4	2.2	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.4	2.2	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.4	2.2	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.4	2.2	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.4	2.2	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.4	2.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	4.4	J	5.4	2.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	900		310	130	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260B	7.1		5.4	2.2	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.4	2.2	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.4	2.2	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.4	2.2	ug/kg	1
Ethylbenzene	100-41-4	8260B	13		5.4	2.2	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		11	4.3	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.4	2.2	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.4	2.2	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.4	2.2	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	4.3	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.4	2.2	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.4	2.2	ug/kg	1
Styrene	100-42-5	8260B	170		5.4	2.2	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.4	2.2	ug/kg	1
Tetrachloroethene	127-18-4	8260B	7.1		5.4	2.2	ug/kg	1
Toluene	108-88-3	8260B	5.1	J	5.4	2.2	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.4	2.2	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.4	2.2	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.4	2.2	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-035
Description: B-49(6')	Matrix: Solid
Date Sampled: 03/29/2018 1448	% Solids: 78.8 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1646	JM1		68708	5.87
2	5035 High	8260B	1	04/06/2018 1641	JM1		68933	6.41

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.4	2.2	ug/kg	1
Trichloroethene	79-01-6	8260B	1400		310	130	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		5.4	2.2	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.4	2.2	ug/kg	1
Xylenes (total)	1330-20-7	8260B	40		11	4.3	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	53-142		101	53-142
Bromofluorobenzene		111	47-138		104	47-138
Toluene-d8		112	68-124		104	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-036
Description: B-49(8')	Matrix: Solid
Date Sampled: 03/29/2018 1450	% Solids: 87.7 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 2008	JM1		68708	6.70

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	180		17	3.4	ug/kg	1
Benzene	71-43-2	8260B	ND		4.3	1.7	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.3	1.7	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.3	1.7	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.3	1.7	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	19		17	3.4	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.3	1.7	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.3	1.7	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.3	1.7	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.3	1.7	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.3	1.7	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.3	1.7	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.3	1.7	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.3	1.7	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.3	1.7	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.3	1.7	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.3	1.7	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.3	1.7	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.3	1.7	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.3	1.7	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.3	1.7	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.3	1.7	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	2.9	J	4.3	1.7	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	210	E	4.3	1.7	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	18		4.3	1.7	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.3	1.7	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.3	1.7	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.3	1.7	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.3	1.7	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		8.5	3.4	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.3	1.7	ug/kg	1
Methyl acetate	79-20-9	8260B	3.3	J	4.3	1.7	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.3	1.7	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		8.5	3.4	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.3	1.7	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.3	1.7	ug/kg	1
Styrene	100-42-5	8260B	130		4.3	1.7	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.3	1.7	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.3	1.7	ug/kg	1
Toluene	108-88-3	8260B	ND		4.3	1.7	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.3	1.7	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.3	1.7	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.3	1.7	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.3	1.7	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-036
Description: B-49(8')	Matrix: Solid
Date Sampled: 03/29/2018 1450	% Solids: 87.7 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 2008	JM1		68708	6.70

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	130		4.3	1.7	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.3	1.7	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.3	1.7	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		8.5	3.4	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	53-142
Bromofluorobenzene		112	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-037
Description: B-49(10')	Matrix: Solid
Date Sampled: 03/29/2018 1452	% Solids: 84.8 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1731	JM1		68708	6.22

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	140		19	3.8	ug/kg	1
Benzene	71-43-2	8260B	ND		4.7	1.9	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.7	1.9	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.7	1.9	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.7	1.9	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		19	3.8	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.7	1.9	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.7	1.9	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.7	1.9	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.7	1.9	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.7	1.9	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.7	1.9	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.7	1.9	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.7	1.9	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.7	1.9	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.7	1.9	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.7	1.9	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.7	1.9	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.7	1.9	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.7	1.9	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.7	1.9	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.7	1.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.7	1.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	140		4.7	1.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	16		4.7	1.9	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.7	1.9	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.7	1.9	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.7	1.9	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.7	1.9	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.5	3.8	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.7	1.9	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.7	1.9	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.7	1.9	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.5	3.8	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.7	1.9	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.7	1.9	ug/kg	1
Styrene	100-42-5	8260B	160		4.7	1.9	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.7	1.9	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.7	1.9	ug/kg	1
Toluene	108-88-3	8260B	ND		4.7	1.9	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.7	1.9	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.7	1.9	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.7	1.9	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.7	1.9	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-037
Description: B-49(10')	Matrix: Solid
Date Sampled: 03/29/2018 1452	% Solids: 84.8 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1731	JM1		68708	6.22

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	96		4.7	1.9	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.7	1.9	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.7	1.9	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.5	3.8	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		107	53-142
Bromofluorobenzene		110	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-038
Description: B-49(12')	Matrix: Solid
Date Sampled: 03/29/2018 1453	% Solids: 88.0 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1753	JM1		68708	5.24
2	5035 High	8260B	1	04/06/2018 1726	JM1		68933	5.25

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	260		22	4.3	ug/kg	1
Benzene	71-43-2	8260B	ND		5.4	2.2	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.4	2.2	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.4	2.2	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.4	2.2	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	7.0	J	22	4.3	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.4	2.2	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.4	2.2	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.4	2.2	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.4	2.2	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.4	2.2	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.4	2.2	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.4	2.2	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.4	2.2	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.4	2.2	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.4	2.2	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.4	2.2	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.4	2.2	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.4	2.2	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.4	2.2	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.4	2.2	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.4	2.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.4	2.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	30		5.4	2.2	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.4	2.2	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.4	2.2	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.4	2.2	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.4	2.2	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.4	2.2	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		11	4.3	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.4	2.2	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.4	2.2	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.4	2.2	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	4.3	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.4	2.2	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.4	2.2	ug/kg	1
Styrene	100-42-5	8260B	300		300	120	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.4	2.2	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.4	2.2	ug/kg	1
Toluene	108-88-3	8260B	ND		5.4	2.2	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.4	2.2	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.4	2.2	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.4	2.2	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-038
Description: B-49(12')	Matrix: Solid
Date Sampled: 03/29/2018 1453	% Solids: 88.0 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1753	JM1		68708	5.24
2	5035 High	8260B	1	04/06/2018 1726	JM1		68933	5.25

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.4	2.2	ug/kg	1
Trichloroethene	79-01-6	8260B	15		5.4	2.2	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.4	2.2	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.4	2.2	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		11	4.3	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		105	53-142		108	53-142
Bromofluorobenzene		113	47-138		102	47-138
Toluene-d8		110	68-124		104	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-039
Description: B-49(14')	Matrix: Solid
Date Sampled: 03/29/2018 1456	% Solids: 80.2 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1816	JM1		68708	6.34

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	190		20	3.9	ug/kg	1
Benzene	71-43-2	8260B	ND		4.9	2.0	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.9	2.0	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.9	2.0	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.9	2.0	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	16	J	20	3.9	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.9	2.0	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.9	2.0	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.9	2.0	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.9	2.0	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.9	2.0	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.9	2.0	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.9	2.0	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.9	2.0	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.9	2.0	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.9	2.0	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.9	2.0	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.9	2.0	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.9	2.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	3.4	J	4.9	2.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	200	E	4.9	2.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	22		4.9	2.0	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.9	2.0	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.9	2.0	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.9	2.0	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.9	2.0	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.8	3.9	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.9	2.0	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.9	2.0	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.9	2.0	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.8	3.9	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.9	2.0	ug/kg	1
Methylene chloride	75-09-2	8260B	7.9		4.9	2.0	ug/kg	1
Styrene	100-42-5	8260B	190		4.9	2.0	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.9	2.0	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.9	2.0	ug/kg	1
Toluene	108-88-3	8260B	ND		4.9	2.0	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.9	2.0	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.9	2.0	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.9	2.0	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.9	2.0	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-039
Description: B-49(14')	Matrix: Solid
Date Sampled: 03/29/2018 1456	% Solids: 80.2 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1816	JM1		68708	6.34

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	150		4.9	2.0	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.9	2.0	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.9	2.0	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.8	3.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	53-142
Bromofluorobenzene		108	47-138
Toluene-d8		111	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-040
Description: B-49(15')	Matrix: Solid
Date Sampled: 03/29/2018 1459	% Solids: 80.4 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1838	JM1		68708	5.91

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	130		21	4.2	ug/kg	1
Benzene	71-43-2	8260B	ND		5.3	2.1	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.3	2.1	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.3	2.1	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.3	2.1	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		21	4.2	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.3	2.1	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.3	2.1	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.3	2.1	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.3	2.1	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.3	2.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.3	2.1	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.3	2.1	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.3	2.1	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.3	2.1	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.3	2.1	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.3	2.1	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.3	2.1	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.3	2.1	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.3	2.1	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.3	2.1	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.3	2.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.3	2.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	160		5.3	2.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	13		5.3	2.1	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.3	2.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.3	2.1	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.3	2.1	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.3	2.1	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		11	4.2	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.3	2.1	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.3	2.1	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.3	2.1	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	4.2	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.3	2.1	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.3	2.1	ug/kg	1
Styrene	100-42-5	8260B	190		5.3	2.1	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.3	2.1	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.3	2.1	ug/kg	1
Toluene	108-88-3	8260B	ND		5.3	2.1	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.3	2.1	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.3	2.1	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.3	2.1	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.3	2.1	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-040
Description: B-49(15')	Matrix: Solid
Date Sampled: 03/29/2018 1459	% Solids: 80.4 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1838	JM1		68708	5.91

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	93		5.3	2.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.3	2.1	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.3	2.1	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		11	4.2	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	53-142
Bromofluorobenzene		109	47-138
Toluene-d8		111	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-041
Description: B-45(2')	Matrix: Solid
Date Sampled: 03/29/2018 1150	% Solids: 85.0 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1901	JM1		68708	5.62
2	5035 High	8260B	1	04/06/2018 1748	JM1		68933	3.30

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	130		21	4.2	ug/kg	1
Benzene	71-43-2	8260B	ND		5.2	2.1	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.2	2.1	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.2	2.1	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.2	2.1	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		21	4.2	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.2	2.1	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.2	2.1	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.2	2.1	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.2	2.1	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.2	2.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.2	2.1	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.2	2.1	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.2	2.1	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.2	2.1	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.2	2.1	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.2	2.1	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.2	2.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.2	2.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.2	2.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.2	2.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.2	2.1	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.2	2.1	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.2	2.1	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		10	4.2	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.2	2.1	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.2	2.1	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.2	2.1	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	4.2	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.2	2.1	ug/kg	1
Methylene chloride	75-09-2	8260B	8.4		5.2	2.1	ug/kg	1
Styrene	100-42-5	8260B	540		490	200	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.2	2.1	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.2	2.1	ug/kg	1
Toluene	108-88-3	8260B	ND		5.2	2.1	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.2	2.1	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.2	2.1	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.2	2.1	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-041
Description: B-45(2')	Matrix: Solid
Date Sampled: 03/29/2018 1150	% Solids: 85.0 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1901	JM1		68708	5.62
2	5035 High	8260B	1	04/06/2018 1748	JM1		68933	3.30

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.2	2.1	ug/kg	1
Trichloroethene	79-01-6	8260B	ND		5.2	2.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.2	2.1	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.2	2.1	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		10	4.2	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	53-142		112	53-142
Bromofluorobenzene		107	47-138		108	47-138
Toluene-d8		111	68-124		112	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-042
Description: B-45(4')	Matrix: Solid
Date Sampled: 03/29/2018 1155	% Solids: 84.5 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1923	JM1		68708	5.91

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	330		20	4.0	ug/kg	1
Benzene	71-43-2	8260B	ND		5.0	2.0	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	2.0	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.0	2.0	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	2.0	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		20	4.0	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.0	2.0	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	2.0	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.0	2.0	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.0	2.0	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.0	2.0	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	2.0	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	2.0	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	2.0	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	2.0	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	2.0	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	2.0	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	2.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	2.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	2.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	2.0	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	2.0	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	2.0	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	2.0	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.0	2.0	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		10	4.0	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	2.0	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.0	2.0	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	2.0	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	4.0	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	2.0	ug/kg	1
Methylene chloride	75-09-2	8260B	18		5.0	2.0	ug/kg	1
Styrene	100-42-5	8260B	120		5.0	2.0	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	2.0	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	2.0	ug/kg	1
Toluene	108-88-3	8260B	ND		5.0	2.0	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	2.0	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	2.0	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	2.0	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	2.0	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-042
Description: B-45(4')	Matrix: Solid
Date Sampled: 03/29/2018 1155	% Solids: 84.5 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1923	JM1		68708	5.91

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	2.0	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	2.0	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.0	2.0	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		10	4.0	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	53-142
Bromofluorobenzene		107	47-138
Toluene-d8		110	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-043
Description: B-45(6')	Matrix: Solid
Date Sampled: 03/29/2018 1200	% Solids: 76.1 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1946	JM1		68708	5.67

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	240		23	4.6	ug/kg	1
Benzene	71-43-2	8260B	ND		5.8	2.3	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.8	2.3	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.8	2.3	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.8	2.3	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	5.3	J	23	4.6	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.8	2.3	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.8	2.3	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.8	2.3	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.8	2.3	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.8	2.3	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.8	2.3	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.8	2.3	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.8	2.3	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.8	2.3	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.8	2.3	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.8	2.3	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.8	2.3	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.8	2.3	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.8	2.3	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.8	2.3	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.8	2.3	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.8	2.3	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.8	2.3	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.8	2.3	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.8	2.3	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.8	2.3	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.8	2.3	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.8	2.3	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		12	4.6	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.8	2.3	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.8	2.3	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.8	2.3	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		12	4.6	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.8	2.3	ug/kg	1
Methylene chloride	75-09-2	8260B	9.3		5.8	2.3	ug/kg	1
Styrene	100-42-5	8260B	170		5.8	2.3	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.8	2.3	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.8	2.3	ug/kg	1
Toluene	108-88-3	8260B	ND		5.8	2.3	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.8	2.3	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.8	2.3	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.8	2.3	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.8	2.3	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-043
Description: B-45(6')	Matrix: Solid
Date Sampled: 03/29/2018 1200	% Solids: 76.1 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/04/2018 1946	JM1		68708	5.67

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	18		5.8	2.3	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.8	2.3	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.8	2.3	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		12	4.6	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	53-142
Bromofluorobenzene		107	47-138
Toluene-d8		116	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-044
Description: B-45(8')	Matrix: Solid
Date Sampled: 03/29/2018 1203	% Solids: 81.3 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/05/2018 1545	JM1		68865	5.87

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	100		21	4.2	ug/kg	1
Benzene	71-43-2	8260B	ND		5.2	2.1	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.2	2.1	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.2	2.1	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.2	2.1	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		21	4.2	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.2	2.1	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.2	2.1	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.2	2.1	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.2	2.1	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.2	2.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.2	2.1	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.2	2.1	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.2	2.1	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.2	2.1	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.2	2.1	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.2	2.1	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.2	2.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.2	2.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.2	2.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.2	2.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.2	2.1	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.2	2.1	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.2	2.1	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		10	4.2	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.2	2.1	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.2	2.1	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.2	2.1	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	4.2	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.2	2.1	ug/kg	1
Methylene chloride	75-09-2	8260B	4.8	J	5.2	2.1	ug/kg	1
Styrene	100-42-5	8260B	100		5.2	2.1	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.2	2.1	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.2	2.1	ug/kg	1
Toluene	108-88-3	8260B	ND		5.2	2.1	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.2	2.1	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.2	2.1	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.2	2.1	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.2	2.1	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-044
Description: B-45(8')	Matrix: Solid
Date Sampled: 03/29/2018 1203	% Solids: 81.3 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/05/2018 1545	JM1		68865	5.87

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	14		5.2	2.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.2	2.1	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.2	2.1	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		10	4.2	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	53-142
Bromofluorobenzene		108	47-138
Toluene-d8		112	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-045
Description: B-45(10')	Matrix: Solid
Date Sampled: 03/29/2018 1205	% Solids: 82.5 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/05/2018 1608	JM1		68865	5.50

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	86		22	4.4	ug/kg	1
Benzene	71-43-2	8260B	ND		5.5	2.2	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.5	2.2	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.5	2.2	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.5	2.2	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		22	4.4	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.5	2.2	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.5	2.2	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.5	2.2	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.5	2.2	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.5	2.2	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.5	2.2	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.5	2.2	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.5	2.2	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.5	2.2	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.5	2.2	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.5	2.2	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.5	2.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.5	2.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.5	2.2	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.5	2.2	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.5	2.2	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.5	2.2	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.5	2.2	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		11	4.4	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.5	2.2	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.5	2.2	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.5	2.2	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	4.4	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.5	2.2	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.5	2.2	ug/kg	1
Styrene	100-42-5	8260B	170		5.5	2.2	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.5	2.2	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.5	2.2	ug/kg	1
Toluene	108-88-3	8260B	ND		5.5	2.2	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.5	2.2	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.5	2.2	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.5	2.2	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.5	2.2	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-045
Description: B-45(10')	Matrix: Solid
Date Sampled: 03/29/2018 1205	% Solids: 82.5 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/05/2018 1608	JM1		68865	5.50

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	20		5.5	2.2	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.5	2.2	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.5	2.2	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		11	4.4	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	53-142
Bromofluorobenzene		109	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-046
Description: B-45(12')	Matrix: Solid
Date Sampled: 03/29/2018 1208	% Solids: 80.1 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/05/2018 1630	JM1		68865	6.03

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	47		21	4.1	ug/kg	1
Benzene	71-43-2	8260B	ND		5.2	2.1	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.2	2.1	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.2	2.1	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.2	2.1	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		21	4.1	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.2	2.1	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.2	2.1	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.2	2.1	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.2	2.1	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.2	2.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.2	2.1	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.2	2.1	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.2	2.1	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.2	2.1	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.2	2.1	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.2	2.1	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.2	2.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.2	2.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.2	2.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.2	2.1	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.2	2.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.2	2.1	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.2	2.1	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.2	2.1	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		10	4.1	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.2	2.1	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.2	2.1	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.2	2.1	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	4.1	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.2	2.1	ug/kg	1
Methylene chloride	75-09-2	8260B	5.4		5.2	2.1	ug/kg	1
Styrene	100-42-5	8260B	130		5.2	2.1	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.2	2.1	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.2	2.1	ug/kg	1
Toluene	108-88-3	8260B	ND		5.2	2.1	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.2	2.1	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.2	2.1	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.2	2.1	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.2	2.1	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-046
Description: B-45(12')	Matrix: Solid
Date Sampled: 03/29/2018 1208	% Solids: 80.1 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/05/2018 1630	JM1		68865	6.03

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	22		5.2	2.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.2	2.1	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.2	2.1	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		10	4.1	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	53-142
Bromofluorobenzene		111	47-138
Toluene-d8		110	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-047
Description: B-45(14')	Matrix: Solid
Date Sampled: 03/29/2018 1212	% Solids: 81.3 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/05/2018 1653	JM1		68865	5.62

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	120		22	4.4	ug/kg	1
Benzene	71-43-2	8260B	ND		5.5	2.2	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.5	2.2	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.5	2.2	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.5	2.2	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		22	4.4	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.5	2.2	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.5	2.2	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.5	2.2	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.5	2.2	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.5	2.2	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.5	2.2	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.5	2.2	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.5	2.2	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.5	2.2	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.5	2.2	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.5	2.2	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.5	2.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.5	2.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.5	2.2	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.5	2.2	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.5	2.2	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.5	2.2	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.5	2.2	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.5	2.2	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		11	4.4	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.5	2.2	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.5	2.2	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.5	2.2	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	4.4	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.5	2.2	ug/kg	1
Methylene chloride	75-09-2	8260B	8.2		5.5	2.2	ug/kg	1
Styrene	100-42-5	8260B	240	E	5.5	2.2	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.5	2.2	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.5	2.2	ug/kg	1
Toluene	108-88-3	8260B	ND		5.5	2.2	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.5	2.2	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.5	2.2	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.5	2.2	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.5	2.2	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-047
Description: B-45(14')	Matrix: Solid
Date Sampled: 03/29/2018 1212	% Solids: 81.3 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/05/2018 1653	JM1		68865	5.62

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	22		5.5	2.2	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.5	2.2	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.5	2.2	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		11	4.4	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	53-142
Bromofluorobenzene		107	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-048
Description: B-45(15')	Matrix: Solid
Date Sampled: 03/29/2018 1215	% Solids: 79.8 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/05/2018 1715	JM1		68865	5.93

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	120		21	4.2	ug/kg	1
Benzene	71-43-2	8260B	ND		5.3	2.1	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.3	2.1	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.3	2.1	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.3	2.1	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		21	4.2	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.3	2.1	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.3	2.1	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.3	2.1	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.3	2.1	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.3	2.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.3	2.1	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.3	2.1	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.3	2.1	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.3	2.1	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.3	2.1	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.3	2.1	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.3	2.1	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.3	2.1	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.3	2.1	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.3	2.1	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.3	2.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.3	2.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.3	2.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.3	2.1	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.3	2.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.3	2.1	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.3	2.1	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.3	2.1	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		11	4.2	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.3	2.1	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.3	2.1	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.3	2.1	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	4.2	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.3	2.1	ug/kg	1
Methylene chloride	75-09-2	8260B	8.3		5.3	2.1	ug/kg	1
Styrene	100-42-5	8260B	160		5.3	2.1	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.3	2.1	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.3	2.1	ug/kg	1
Toluene	108-88-3	8260B	ND		5.3	2.1	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.3	2.1	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.3	2.1	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.3	2.1	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.3	2.1	ug/kg	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-048
Description: B-45(15')	Matrix: Solid
Date Sampled: 03/29/2018 1215	% Solids: 79.8 03/31/2018 1510
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	04/05/2018 1715	JM1		68865	5.93

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	9.2		5.3	2.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.3	2.1	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.3	2.1	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		11	4.2	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	53-142
Bromofluorobenzene		114	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
 H = Out of holding time W = Reported on wet weight basis

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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-049
Description: TB-1	Matrix: Aqueous
Date Sampled: 03/29/2018	
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/04/2018 2305	BWS		68777

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.49	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.53	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-049
Description: TB-1	Matrix: Aqueous
Date Sampled: 03/29/2018	
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/04/2018 2305	BWS		68777

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.50	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		105	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-050
Description: TB-2	Matrix: Aqueous
Date Sampled: 03/29/2018	
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/04/2018 2326	BWS		68777

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		5.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	0.49	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		5.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		5.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		5.0	0.53	ug/L	1
Chloroform	67-66-3	8260B	ND		5.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		5.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		5.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		5.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	0.40	ug/L	1

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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Volatile Organic Compounds by GC/MS

Client: AECOM	Laboratory ID: TC30002-050
Description: TB-2	Matrix: Aqueous
Date Sampled: 03/29/2018	
Date Received: 03/29/2018	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	04/04/2018 2326	BWS		68777

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	0.50	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		2.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		102	70-130
Toluene-d8		102	70-130

LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit
 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL
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QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: TQ68660-001

Matrix: Solid

Batch: 68660

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	4.0	ug/kg	04/03/2018 1124
Benzene	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Bromodichloromethane	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Bromoform	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Bromomethane (Methyl bromide)	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
2-Butanone (MEK)	ND		1	20	4.0	ug/kg	04/03/2018 1124
Carbon disulfide	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Carbon tetrachloride	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Chlorobenzene	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Chloroethane	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Chloroform	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Chloromethane (Methyl chloride)	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Cyclohexane	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Dibromochloromethane	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
1,2-Dibromoethane (EDB)	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
1,2-Dichlorobenzene	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
1,3-Dichlorobenzene	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
1,4-Dichlorobenzene	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Dichlorodifluoromethane	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
1,1-Dichloroethane	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
1,2-Dichloroethane	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
1,1-Dichloroethene	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
cis-1,2-Dichloroethene	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
trans-1,2-Dichloroethene	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
1,2-Dichloropropane	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
cis-1,3-Dichloropropene	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
trans-1,3-Dichloropropene	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Ethylbenzene	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
2-Hexanone	ND		1	10	4.0	ug/kg	04/03/2018 1124
Isopropylbenzene	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Methyl acetate	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
4-Methyl-2-pentanone	ND		1	10	4.0	ug/kg	04/03/2018 1124
Methylcyclohexane	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Methylene chloride	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Styrene	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
1,1,2,2-Tetrachloroethane	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Tetrachloroethene	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Toluene	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
1,2,4-Trichlorobenzene	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
1,1,1-Trichloroethane	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
1,1,2-Trichloroethane	ND		1	5.0	2.0	ug/kg	04/03/2018 1124

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: TQ68660-001

Matrix: Solid

Batch: 68660

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Trichlorofluoromethane	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Vinyl chloride	ND		1	5.0	2.0	ug/kg	04/03/2018 1124
Xylenes (total)	ND		1	10	4.0	ug/kg	04/03/2018 1124
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		103	53-142				
Bromofluorobenzene		111	47-138				
Toluene-d8		109	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: TQ68660-002

Matrix: Solid

Batch: 68660

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	96		1	96	60-140	04/03/2018 1017
Benzene	50	49		1	99	70-130	04/03/2018 1017
Bromodichloromethane	50	49		1	97	70-130	04/03/2018 1017
Bromoform	50	49		1	98	70-130	04/03/2018 1017
Bromomethane (Methyl bromide)	50	54		1	108	70-130	04/03/2018 1017
2-Butanone (MEK)	100	96		1	96	60-140	04/03/2018 1017
Carbon disulfide	50	59		1	119	70-130	04/03/2018 1017
Carbon tetrachloride	50	49		1	99	70-130	04/03/2018 1017
Chlorobenzene	50	50		1	100	70-130	04/03/2018 1017
Chloroethane	50	50		1	99	70-130	04/03/2018 1017
Chloroform	50	51		1	101	70-130	04/03/2018 1017
Chloromethane (Methyl chloride)	50	57		1	114	60-140	04/03/2018 1017
Cyclohexane	50	47		1	95	70-130	04/03/2018 1017
1,2-Dibromo-3-chloropropane (DBCP)	50	45		1	91	70-130	04/03/2018 1017
Dibromochloromethane	50	50		1	100	70-130	04/03/2018 1017
1,2-Dibromoethane (EDB)	50	48		1	97	70-130	04/03/2018 1017
1,2-Dichlorobenzene	50	49		1	99	70-130	04/03/2018 1017
1,3-Dichlorobenzene	50	49		1	98	70-130	04/03/2018 1017
1,4-Dichlorobenzene	50	48		1	97	70-130	04/03/2018 1017
Dichlorodifluoromethane	50	54		1	108	60-140	04/03/2018 1017
1,1-Dichloroethane	50	51		1	103	70-130	04/03/2018 1017
1,2-Dichloroethane	50	51		1	101	70-130	04/03/2018 1017
1,1-Dichloroethene	50	53		1	106	70-130	04/03/2018 1017
cis-1,2-Dichloroethene	50	50		1	101	70-130	04/03/2018 1017
trans-1,2-Dichloroethene	50	51		1	102	70-130	04/03/2018 1017
1,2-Dichloropropane	50	50		1	99	70-130	04/03/2018 1017
cis-1,3-Dichloropropene	50	49		1	99	70-130	04/03/2018 1017
trans-1,3-Dichloropropene	50	49		1	97	70-130	04/03/2018 1017
Ethylbenzene	50	49		1	98	70-130	04/03/2018 1017
2-Hexanone	100	91		1	91	70-130	04/03/2018 1017
Isopropylbenzene	50	49		1	98	70-130	04/03/2018 1017
Methyl acetate	50	61		1	121	70-130	04/03/2018 1017
Methyl tertiary butyl ether (MTBE)	50	50		1	100	70-130	04/03/2018 1017
4-Methyl-2-pentanone	100	92		1	92	70-130	04/03/2018 1017
Methylcyclohexane	50	48		1	95	70-130	04/03/2018 1017
Methylene chloride	50	48		1	96	70-130	04/03/2018 1017
Styrene	50	50		1	100	70-130	04/03/2018 1017
1,1,2,2-Tetrachloroethane	50	47		1	94	70-130	04/03/2018 1017
Tetrachloroethene	50	50		1	99	70-130	04/03/2018 1017
Toluene	50	50		1	101	70-130	04/03/2018 1017
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	51		1	101	70-130	04/03/2018 1017
1,2,4-Trichlorobenzene	50	47		1	94	70-130	04/03/2018 1017
1,1,1-Trichloroethane	50	50		1	101	70-130	04/03/2018 1017
1,1,2-Trichloroethane	50	48		1	96	70-130	04/03/2018 1017

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: TQ68660-002

Matrix: Solid

Batch: 68660

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	49		1	98	70-130	04/03/2018 1017
Trichlorofluoromethane	50	50		1	101	70-130	04/03/2018 1017
Vinyl chloride	50	52		1	104	70-130	04/03/2018 1017
Xylenes (total)	100	97		1	97	70-130	04/03/2018 1017
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		101	53-142				
Bromofluorobenzene		113	47-138				
Toluene-d8		110	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and \geq DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - LCSD

Sample ID: TQ68660-003

Matrix: Solid

Batch: 68660

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	110		1	110	14	60-140	20	04/03/2018 1039
Benzene	50	52		1	103	4.4	70-130	20	04/03/2018 1039
Bromodichloromethane	50	51		1	102	4.7	70-130	20	04/03/2018 1039
Bromoform	50	51		1	101	3.0	70-130	20	04/03/2018 1039
Bromomethane (Methyl bromide)	50	53		1	107	0.57	70-130	20	04/03/2018 1039
2-Butanone (MEK)	100	110		1	110	13	60-140	20	04/03/2018 1039
Carbon disulfide	50	62		1	124	4.3	70-130	20	04/03/2018 1039
Carbon tetrachloride	50	52		1	103	4.5	70-130	20	04/03/2018 1039
Chlorobenzene	50	51		1	101	1.1	70-130	20	04/03/2018 1039
Chloroethane	50	50		1	101	1.7	70-130	20	04/03/2018 1039
Chloroform	50	52		1	104	3.2	70-130	20	04/03/2018 1039
Chloromethane (Methyl chloride)	50	60		1	120	5.2	60-140	20	04/03/2018 1039
Cyclohexane	50	50		1	101	5.8	70-130	20	04/03/2018 1039
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	93	2.3	70-130	20	04/03/2018 1039
Dibromochloromethane	50	51		1	102	1.7	70-130	20	04/03/2018 1039
1,2-Dibromoethane (EDB)	50	50		1	100	3.4	70-130	20	04/03/2018 1039
1,2-Dichlorobenzene	50	50		1	100	2.0	70-130	20	04/03/2018 1039
1,3-Dichlorobenzene	50	50		1	101	2.9	70-130	20	04/03/2018 1039
1,4-Dichlorobenzene	50	49		1	99	1.9	70-130	20	04/03/2018 1039
Dichlorodifluoromethane	50	56		1	112	3.0	60-140	20	04/03/2018 1039
1,1-Dichloroethane	50	53		1	106	3.2	70-130	20	04/03/2018 1039
1,2-Dichloroethane	50	52		1	105	3.1	70-130	20	04/03/2018 1039
1,1-Dichloroethene	50	56		1	113	6.0	70-130	20	04/03/2018 1039
cis-1,2-Dichloroethene	50	52		1	104	3.6	70-130	20	04/03/2018 1039
trans-1,2-Dichloroethene	50	54		1	107	5.0	70-130	20	04/03/2018 1039
1,2-Dichloropropane	50	52		1	103	4.0	70-130	20	04/03/2018 1039
cis-1,3-Dichloropropene	50	51		1	103	4.1	70-130	20	04/03/2018 1039
trans-1,3-Dichloropropene	50	50		1	100	3.1	70-130	20	04/03/2018 1039
Ethylbenzene	50	50		1	101	3.3	70-130	20	04/03/2018 1039
2-Hexanone	100	100		1	102	12	70-130	20	04/03/2018 1039
Isopropylbenzene	50	50		1	101	2.3	70-130	20	04/03/2018 1039
Methyl acetate	50	63		1	125	3.3	70-130	20	04/03/2018 1039
Methyl tertiary butyl ether (MTBE)	50	52		1	104	4.1	70-130	20	04/03/2018 1039
4-Methyl-2-pentanone	100	97		1	97	5.2	70-130	20	04/03/2018 1039
Methylcyclohexane	50	51		1	102	6.8	70-130	20	04/03/2018 1039
Methylene chloride	50	51		1	102	5.4	70-130	20	04/03/2018 1039
Styrene	50	51		1	102	2.1	70-130	20	04/03/2018 1039
1,1,2,2-Tetrachloroethane	50	48		1	95	1.7	70-130	20	04/03/2018 1039
Tetrachloroethene	50	51		1	102	3.0	70-130	20	04/03/2018 1039
Toluene	50	52		1	103	2.7	70-130	20	04/03/2018 1039
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	52		1	105	3.2	70-130	20	04/03/2018 1039
1,2,4-Trichlorobenzene	50	48		1	95	0.94	70-130	20	04/03/2018 1039
1,1,1-Trichloroethane	50	52		1	105	3.9	70-130	20	04/03/2018 1039
1,1,2-Trichloroethane	50	49		1	98	2.3	70-130	20	04/03/2018 1039

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - LCSD

Sample ID: TQ68660-003

Matrix: Solid

Batch: 68660

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	52		1	105	6.5	70-130	20	04/03/2018 1039
Trichlorofluoromethane	50	49		1	99	1.6	70-130	20	04/03/2018 1039
Vinyl chloride	50	52		1	105	0.59	70-130	20	04/03/2018 1039
Xylenes (total)	100	100		1	100	3.7	70-130	20	04/03/2018 1039
Surrogate	Q	% Rec	Acceptance Limit						
1,2-Dichloroethane-d4		105	53-142						
Bromofluorobenzene		113	47-138						
Toluene-d8		112	68-124						

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

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LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - MB

Sample ID: TQ68661-001

Matrix: Solid

Batch: 68661

Prep Method: 5035 High

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	1000	200	ug/kg	04/02/2018 1845
Benzene	ND		1	250	100	ug/kg	04/02/2018 1845
Bromodichloromethane	ND		1	250	100	ug/kg	04/02/2018 1845
Bromoform	ND		1	250	100	ug/kg	04/02/2018 1845
Bromomethane (Methyl bromide)	ND		1	250	100	ug/kg	04/02/2018 1845
2-Butanone (MEK)	ND		1	1000	200	ug/kg	04/02/2018 1845
Carbon disulfide	ND		1	250	100	ug/kg	04/02/2018 1845
Carbon tetrachloride	ND		1	250	100	ug/kg	04/02/2018 1845
Chlorobenzene	ND		1	250	100	ug/kg	04/02/2018 1845
Chloroethane	ND		1	250	100	ug/kg	04/02/2018 1845
Chloroform	ND		1	250	100	ug/kg	04/02/2018 1845
Chloromethane (Methyl chloride)	ND		1	250	100	ug/kg	04/02/2018 1845
Cyclohexane	ND		1	250	100	ug/kg	04/02/2018 1845
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	250	100	ug/kg	04/02/2018 1845
Dibromochloromethane	ND		1	250	100	ug/kg	04/02/2018 1845
1,2-Dibromoethane (EDB)	ND		1	250	100	ug/kg	04/02/2018 1845
1,2-Dichlorobenzene	ND		1	250	100	ug/kg	04/02/2018 1845
1,3-Dichlorobenzene	ND		1	250	100	ug/kg	04/02/2018 1845
1,4-Dichlorobenzene	ND		1	250	100	ug/kg	04/02/2018 1845
Dichlorodifluoromethane	ND		1	250	100	ug/kg	04/02/2018 1845
1,1-Dichloroethane	ND		1	250	100	ug/kg	04/02/2018 1845
1,2-Dichloroethane	ND		1	250	100	ug/kg	04/02/2018 1845
1,1-Dichloroethene	ND		1	250	100	ug/kg	04/02/2018 1845
cis-1,2-Dichloroethene	ND		1	250	100	ug/kg	04/02/2018 1845
trans-1,2-Dichloroethene	ND		1	250	100	ug/kg	04/02/2018 1845
1,2-Dichloropropane	ND		1	250	100	ug/kg	04/02/2018 1845
cis-1,3-Dichloropropene	ND		1	250	100	ug/kg	04/02/2018 1845
trans-1,3-Dichloropropene	ND		1	250	100	ug/kg	04/02/2018 1845
Ethylbenzene	ND		1	250	100	ug/kg	04/02/2018 1845
2-Hexanone	ND		1	500	200	ug/kg	04/02/2018 1845
Isopropylbenzene	ND		1	250	100	ug/kg	04/02/2018 1845
Methyl acetate	ND		1	250	100	ug/kg	04/02/2018 1845
Methyl tertiary butyl ether (MTBE)	ND		1	250	100	ug/kg	04/02/2018 1845
4-Methyl-2-pentanone	ND		1	500	200	ug/kg	04/02/2018 1845
Methylcyclohexane	ND		1	250	100	ug/kg	04/02/2018 1845
Methylene chloride	ND		1	250	100	ug/kg	04/02/2018 1845
Styrene	ND		1	250	100	ug/kg	04/02/2018 1845
1,1,2,2-Tetrachloroethane	ND		1	250	100	ug/kg	04/02/2018 1845
Tetrachloroethene	ND		1	250	100	ug/kg	04/02/2018 1845
Toluene	ND		1	250	100	ug/kg	04/02/2018 1845
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	250	100	ug/kg	04/02/2018 1845
1,2,4-Trichlorobenzene	ND		1	250	100	ug/kg	04/02/2018 1845
1,1,1-Trichloroethane	ND		1	250	100	ug/kg	04/02/2018 1845
1,1,2-Trichloroethane	ND		1	250	100	ug/kg	04/02/2018 1845

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - MB

Sample ID: TQ68661-001

Matrix: Solid

Batch: 68661

Prep Method: 5035 High

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	250	100	ug/kg	04/02/2018 1845
Trichlorofluoromethane	ND		1	250	100	ug/kg	04/02/2018 1845
Vinyl chloride	ND		1	250	100	ug/kg	04/02/2018 1845
Xylenes (total)	ND		1	500	200	ug/kg	04/02/2018 1845
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		103	53-142				
Bromofluorobenzene		101	47-138				
Toluene-d8		106	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

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LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: TQ68661-002

Matrix: Solid

Batch: 68661

Prep Method: 5035 High

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	5000	3900		1	78	60-140	04/03/2018 1213
Benzene	2500	2600		1	105	70-130	04/03/2018 1213
Bromodichloromethane	2500	2500		1	100	70-130	04/03/2018 1213
Bromoform	2500	2300		1	93	70-130	04/03/2018 1213
Bromomethane (Methyl bromide)	2500	2400		1	95	70-130	04/03/2018 1213
2-Butanone (MEK)	5000	4700		1	94	60-140	04/03/2018 1213
Carbon disulfide	2500	3000		1	122	70-130	04/03/2018 1213
Carbon tetrachloride	2500	2800		1	113	70-130	04/03/2018 1213
Chlorobenzene	2500	2600		1	104	70-130	04/03/2018 1213
Chloroethane	2500	2100		1	86	70-130	04/03/2018 1213
Chloroform	2500	2700		1	107	70-130	04/03/2018 1213
Chloromethane (Methyl chloride)	2500	2700		1	107	60-140	04/03/2018 1213
Cyclohexane	2500	2900		1	118	70-130	04/03/2018 1213
1,2-Dibromo-3-chloropropane (DBCP)	2500	1900		1	75	70-130	04/03/2018 1213
Dibromochloromethane	2500	2500		1	98	70-130	04/03/2018 1213
1,2-Dibromoethane (EDB)	2500	2400		1	95	70-130	04/03/2018 1213
1,2-Dichlorobenzene	2500	2500		1	99	70-130	04/03/2018 1213
1,3-Dichlorobenzene	2500	2600		1	104	70-130	04/03/2018 1213
1,4-Dichlorobenzene	2500	2600		1	104	70-130	04/03/2018 1213
Dichlorodifluoromethane	2500	2100		1	85	60-140	04/03/2018 1213
1,1-Dichloroethane	2500	2700		1	108	70-130	04/03/2018 1213
1,2-Dichloroethane	2500	2500		1	101	70-130	04/03/2018 1213
1,1-Dichloroethene	2500	2900		1	117	70-130	04/03/2018 1213
cis-1,2-Dichloroethene	2500	2700		1	107	70-130	04/03/2018 1213
trans-1,2-Dichloroethene	2500	2800		1	112	70-130	04/03/2018 1213
1,2-Dichloropropane	2500	2600		1	103	70-130	04/03/2018 1213
cis-1,3-Dichloropropene	2500	2600		1	103	70-130	04/03/2018 1213
trans-1,3-Dichloropropene	2500	2500		1	99	70-130	04/03/2018 1213
Ethylbenzene	2500	2600		1	105	70-130	04/03/2018 1213
2-Hexanone	5000	4600		1	92	70-130	04/03/2018 1213
Isopropylbenzene	2500	2700		1	106	70-130	04/03/2018 1213
Methyl acetate	2500	3000		1	121	70-130	04/03/2018 1213
Methyl tertiary butyl ether (MTBE)	2500	2400		1	98	70-130	04/03/2018 1213
4-Methyl-2-pentanone	5000	4200		1	85	70-130	04/03/2018 1213
Methylcyclohexane	2500	3000		1	122	70-130	04/03/2018 1213
Methylene chloride	2500	2400		1	97	70-130	04/03/2018 1213
Styrene	2500	2600		1	104	70-130	04/03/2018 1213
1,1,2,2-Tetrachloroethane	2500	2200		1	89	70-130	04/03/2018 1213
Tetrachloroethene	2500	2800		1	113	70-130	04/03/2018 1213
Toluene	2500	2700		1	108	70-130	04/03/2018 1213
1,1,2-Trichloro-1,2,2-Trifluoroethane	2500	3200		1	128	70-130	04/03/2018 1213
1,2,4-Trichlorobenzene	2500	2200		1	87	70-130	04/03/2018 1213
1,1,1-Trichloroethane	2500	2800		1	111	70-130	04/03/2018 1213
1,1,2-Trichloroethane	2500	2400		1	95	70-130	04/03/2018 1213

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: TQ68661-002

Matrix: Solid

Batch: 68661

Prep Method: 5035 High

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	2500	2700		1	109	70-130	04/03/2018 1213
Trichlorofluoromethane	2500	2700		1	107	70-130	04/03/2018 1213
Vinyl chloride	2500	2600		1	105	70-130	04/03/2018 1213
Xylenes (total)	5000	5200		1	103	70-130	04/03/2018 1213
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		93	53-142				
Bromofluorobenzene		97	47-138				
Toluene-d8		99	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and \geq DL

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LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - MB

Sample ID: TQ68671-001

Matrix: Solid

Batch: 68671

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	4.0	ug/kg	04/03/2018 2351
Benzene	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Bromodichloromethane	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Bromoform	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Bromomethane (Methyl bromide)	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
2-Butanone (MEK)	ND		1	20	4.0	ug/kg	04/03/2018 2351
Carbon disulfide	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Carbon tetrachloride	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Chlorobenzene	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Chloroethane	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Chloroform	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Chloromethane (Methyl chloride)	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Cyclohexane	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Dibromochloromethane	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
1,2-Dibromoethane (EDB)	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
1,2-Dichlorobenzene	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
1,3-Dichlorobenzene	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
1,4-Dichlorobenzene	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Dichlorodifluoromethane	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
1,1-Dichloroethane	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
1,2-Dichloroethane	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
1,1-Dichloroethene	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
cis-1,2-Dichloroethene	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
trans-1,2-Dichloroethene	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
1,2-Dichloropropane	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
cis-1,3-Dichloropropene	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
trans-1,3-Dichloropropene	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Ethylbenzene	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
2-Hexanone	ND		1	10	4.0	ug/kg	04/03/2018 2351
Isopropylbenzene	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Methyl acetate	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
4-Methyl-2-pentanone	ND		1	10	4.0	ug/kg	04/03/2018 2351
Methylcyclohexane	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Methylene chloride	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Styrene	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
1,1,2,2-Tetrachloroethane	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Tetrachloroethene	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Toluene	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
1,2,4-Trichlorobenzene	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
1,1,1-Trichloroethane	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
1,1,2-Trichloroethane	ND		1	5.0	2.0	ug/kg	04/03/2018 2351

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - MB

Sample ID: TQ68671-001

Matrix: Solid

Batch: 68671

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Trichlorofluoromethane	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Vinyl chloride	ND		1	5.0	2.0	ug/kg	04/03/2018 2351
Xylenes (total)	ND		1	10	4.0	ug/kg	04/03/2018 2351
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		109	53-142				
Bromofluorobenzene		110	47-138				
Toluene-d8		110	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: TQ68671-002

Matrix: Solid

Batch: 68671

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	97		1	97	60-140	04/03/2018 2245
Benzene	50	49		1	98	70-130	04/03/2018 2245
Bromodichloromethane	50	47		1	94	70-130	04/03/2018 2245
Bromoform	50	47		1	93	70-130	04/03/2018 2245
Bromomethane (Methyl bromide)	50	52		1	104	70-130	04/03/2018 2245
2-Butanone (MEK)	100	97		1	97	60-140	04/03/2018 2245
Carbon disulfide	50	59		1	117	70-130	04/03/2018 2245
Carbon tetrachloride	50	52		1	104	70-130	04/03/2018 2245
Chlorobenzene	50	48		1	96	70-130	04/03/2018 2245
Chloroethane	50	47		1	93	70-130	04/03/2018 2245
Chloroform	50	50		1	99	70-130	04/03/2018 2245
Chloromethane (Methyl chloride)	50	58		1	116	60-140	04/03/2018 2245
Cyclohexane	50	53		1	107	70-130	04/03/2018 2245
1,2-Dibromo-3-chloropropane (DBCP)	50	43		1	85	70-130	04/03/2018 2245
Dibromochloromethane	50	47		1	94	70-130	04/03/2018 2245
1,2-Dibromoethane (EDB)	50	46		1	93	70-130	04/03/2018 2245
1,2-Dichlorobenzene	50	48		1	97	70-130	04/03/2018 2245
1,3-Dichlorobenzene	50	48		1	96	70-130	04/03/2018 2245
1,4-Dichlorobenzene	50	48		1	96	70-130	04/03/2018 2245
Dichlorodifluoromethane	50	63		1	127	60-140	04/03/2018 2245
1,1-Dichloroethane	50	50		1	100	70-130	04/03/2018 2245
1,2-Dichloroethane	50	49		1	97	70-130	04/03/2018 2245
1,1-Dichloroethene	50	54		1	108	70-130	04/03/2018 2245
cis-1,2-Dichloroethene	50	50		1	100	70-130	04/03/2018 2245
trans-1,2-Dichloroethene	50	52		1	103	70-130	04/03/2018 2245
1,2-Dichloropropane	50	49		1	98	70-130	04/03/2018 2245
cis-1,3-Dichloropropene	50	48		1	97	70-130	04/03/2018 2245
trans-1,3-Dichloropropene	50	47		1	93	70-130	04/03/2018 2245
Ethylbenzene	50	49		1	97	70-130	04/03/2018 2245
2-Hexanone	100	92		1	92	70-130	04/03/2018 2245
Isopropylbenzene	50	49		1	97	70-130	04/03/2018 2245
Methyl acetate	50	58		1	117	70-130	04/03/2018 2245
Methyl tertiary butyl ether (MTBE)	50	49		1	97	70-130	04/03/2018 2245
4-Methyl-2-pentanone	100	90		1	90	70-130	04/03/2018 2245
Methylcyclohexane	50	55		1	109	70-130	04/03/2018 2245
Methylene chloride	50	47		1	93	70-130	04/03/2018 2245
Styrene	50	48		1	96	70-130	04/03/2018 2245
1,1,2,2-Tetrachloroethane	50	44		1	87	70-130	04/03/2018 2245
Tetrachloroethene	50	51		1	102	70-130	04/03/2018 2245
Toluene	50	50		1	100	70-130	04/03/2018 2245
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	57		1	114	70-130	04/03/2018 2245
1,2,4-Trichlorobenzene	50	47		1	95	70-130	04/03/2018 2245
1,1,1-Trichloroethane	50	51		1	103	70-130	04/03/2018 2245
1,1,2-Trichloroethane	50	46		1	91	70-130	04/03/2018 2245

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: TQ68671-002

Matrix: Solid

Batch: 68671

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	50		1	99	70-130	04/03/2018 2245
Trichlorofluoromethane	50	53		1	107	70-130	04/03/2018 2245
Vinyl chloride	50	55		1	110	70-130	04/03/2018 2245
Xylenes (total)	100	95		1	95	70-130	04/03/2018 2245
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		103	53-142				
Bromofluorobenzene		110	47-138				
Toluene-d8		110	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - LCSD

Sample ID: TQ68671-003

Matrix: Solid

Batch: 68671

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	96		1	96	0.96	60-140	20	04/03/2018 2307
Benzene	50	49		1	97	0.87	70-130	20	04/03/2018 2307
Bromodichloromethane	50	48		1	96	1.5	70-130	20	04/03/2018 2307
Bromoform	50	49		1	97	4.1	70-130	20	04/03/2018 2307
Bromomethane (Methyl bromide)	50	53		1	105	1.5	70-130	20	04/03/2018 2307
2-Butanone (MEK)	100	100		1	102	4.7	60-140	20	04/03/2018 2307
Carbon disulfide	50	58		1	116	0.83	70-130	20	04/03/2018 2307
Carbon tetrachloride	50	51		1	102	2.4	70-130	20	04/03/2018 2307
Chlorobenzene	50	48		1	96	0.25	70-130	20	04/03/2018 2307
Chloroethane	50	48		1	97	3.4	70-130	20	04/03/2018 2307
Chloroform	50	49		1	98	1.1	70-130	20	04/03/2018 2307
Chloromethane (Methyl chloride)	50	58		1	115	0.57	60-140	20	04/03/2018 2307
Cyclohexane	50	53		1	106	1.2	70-130	20	04/03/2018 2307
1,2-Dibromo-3-chloropropane (DBCP)	50	46		1	92	7.5	70-130	20	04/03/2018 2307
Dibromochloromethane	50	48		1	96	2.3	70-130	20	04/03/2018 2307
1,2-Dibromoethane (EDB)	50	48		1	95	2.7	70-130	20	04/03/2018 2307
1,2-Dichlorobenzene	50	49		1	98	1.3	70-130	20	04/03/2018 2307
1,3-Dichlorobenzene	50	48		1	96	0.054	70-130	20	04/03/2018 2307
1,4-Dichlorobenzene	50	48		1	96	0.14	70-130	20	04/03/2018 2307
Dichlorodifluoromethane	50	60		1	120	5.8	60-140	20	04/03/2018 2307
1,1-Dichloroethane	50	50		1	100	0.29	70-130	20	04/03/2018 2307
1,2-Dichloroethane	50	49		1	99	1.5	70-130	20	04/03/2018 2307
1,1-Dichloroethene	50	54		1	107	1.0	70-130	20	04/03/2018 2307
cis-1,2-Dichloroethene	50	50		1	100	0.066	70-130	20	04/03/2018 2307
trans-1,2-Dichloroethene	50	50		1	100	3.0	70-130	20	04/03/2018 2307
1,2-Dichloropropane	50	49		1	97	0.23	70-130	20	04/03/2018 2307
cis-1,3-Dichloropropene	50	49		1	99	1.9	70-130	20	04/03/2018 2307
trans-1,3-Dichloropropene	50	48		1	96	3.0	70-130	20	04/03/2018 2307
Ethylbenzene	50	48		1	96	0.94	70-130	20	04/03/2018 2307
2-Hexanone	100	95		1	95	3.1	70-130	20	04/03/2018 2307
Isopropylbenzene	50	49		1	97	0.19	70-130	20	04/03/2018 2307
Methyl acetate	50	62		1	124	5.8	70-130	20	04/03/2018 2307
Methyl tertiary butyl ether (MTBE)	50	50		1	100	2.7	70-130	20	04/03/2018 2307
4-Methyl-2-pentanone	100	97		1	97	7.4	70-130	20	04/03/2018 2307
Methylcyclohexane	50	54		1	109	0.59	70-130	20	04/03/2018 2307
Methylene chloride	50	47		1	95	1.3	70-130	20	04/03/2018 2307
Styrene	50	48		1	96	0.35	70-130	20	04/03/2018 2307
1,1,2,2-Tetrachloroethane	50	46		1	92	5.6	70-130	20	04/03/2018 2307
Tetrachloroethene	50	50		1	99	2.9	70-130	20	04/03/2018 2307
Toluene	50	49		1	98	1.2	70-130	20	04/03/2018 2307
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	56		1	111	1.9	70-130	20	04/03/2018 2307
1,2,4-Trichlorobenzene	50	48		1	96	1.1	70-130	20	04/03/2018 2307
1,1,1-Trichloroethane	50	51		1	103	0.097	70-130	20	04/03/2018 2307
1,1,2-Trichloroethane	50	47		1	94	3.0	70-130	20	04/03/2018 2307

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - LCSD

Sample ID: TQ68671-003

Matrix: Solid

Batch: 68671

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	49		1	99	0.63	70-130	20	04/03/2018 2307
Trichlorofluoromethane	50	55		1	110	3.0	70-130	20	04/03/2018 2307
Vinyl chloride	50	54		1	108	1.4	70-130	20	04/03/2018 2307
Xylenes (total)	100	95		1	95	0.077	70-130	20	04/03/2018 2307
Surrogate	Q	% Rec	Acceptance Limit						
1,2-Dichloroethane-d4		105	53-142						
Bromofluorobenzene		114	47-138						
Toluene-d8		113	68-124						

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - MB

Sample ID: TQ68708-001

Matrix: Solid

Batch: 68708

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	4.0	ug/kg	04/04/2018 1158
Benzene	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Bromodichloromethane	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Bromoform	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Bromomethane (Methyl bromide)	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
2-Butanone (MEK)	ND		1	20	4.0	ug/kg	04/04/2018 1158
Carbon disulfide	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Carbon tetrachloride	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Chlorobenzene	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Chloroethane	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Chloroform	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Chloromethane (Methyl chloride)	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Cyclohexane	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Dibromochloromethane	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
1,2-Dibromoethane (EDB)	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
1,2-Dichlorobenzene	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
1,3-Dichlorobenzene	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
1,4-Dichlorobenzene	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Dichlorodifluoromethane	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
1,1-Dichloroethane	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
1,2-Dichloroethane	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
1,1-Dichloroethene	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
cis-1,2-Dichloroethene	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
trans-1,2-Dichloroethene	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
1,2-Dichloropropane	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
cis-1,3-Dichloropropene	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
trans-1,3-Dichloropropene	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Ethylbenzene	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
2-Hexanone	ND		1	10	4.0	ug/kg	04/04/2018 1158
Isopropylbenzene	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Methyl acetate	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
4-Methyl-2-pentanone	ND		1	10	4.0	ug/kg	04/04/2018 1158
Methylcyclohexane	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Methylene chloride	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Styrene	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
1,1,2,2-Tetrachloroethane	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Tetrachloroethene	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Toluene	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
1,2,4-Trichlorobenzene	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
1,1,1-Trichloroethane	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
1,1,2-Trichloroethane	ND		1	5.0	2.0	ug/kg	04/04/2018 1158

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: TQ68708-001

Matrix: Solid

Batch: 68708

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Trichlorofluoromethane	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Vinyl chloride	ND		1	5.0	2.0	ug/kg	04/04/2018 1158
Xylenes (total)	ND		1	10	4.0	ug/kg	04/04/2018 1158
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		108	53-142				
Bromofluorobenzene		116	47-138				
Toluene-d8		111	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: TQ68708-002

Matrix: Solid

Batch: 68708

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	102	60-140	04/04/2018 1059
Benzene	50	54		1	107	70-130	04/04/2018 1059
Bromodichloromethane	50	51		1	103	70-130	04/04/2018 1059
Bromoform	50	51		1	102	70-130	04/04/2018 1059
Bromomethane (Methyl bromide)	50	53		1	107	70-130	04/04/2018 1059
2-Butanone (MEK)	100	100		1	102	60-140	04/04/2018 1059
Carbon disulfide	50	65	N	1	131	70-130	04/04/2018 1059
Carbon tetrachloride	50	54		1	108	70-130	04/04/2018 1059
Chlorobenzene	50	51		1	102	70-130	04/04/2018 1059
Chloroethane	50	48		1	96	70-130	04/04/2018 1059
Chloroform	50	52		1	105	70-130	04/04/2018 1059
Chloromethane (Methyl chloride)	50	59		1	119	60-140	04/04/2018 1059
Cyclohexane	50	54		1	108	70-130	04/04/2018 1059
1,2-Dibromo-3-chloropropane (DBCP)	50	45		1	91	70-130	04/04/2018 1059
Dibromochloromethane	50	52		1	104	70-130	04/04/2018 1059
1,2-Dibromoethane (EDB)	50	51		1	101	70-130	04/04/2018 1059
1,2-Dichlorobenzene	50	52		1	103	70-130	04/04/2018 1059
1,3-Dichlorobenzene	50	50		1	100	70-130	04/04/2018 1059
1,4-Dichlorobenzene	50	50		1	101	70-130	04/04/2018 1059
Dichlorodifluoromethane	50	52		1	104	60-140	04/04/2018 1059
1,1-Dichloroethane	50	54		1	108	70-130	04/04/2018 1059
1,2-Dichloroethane	50	53		1	106	70-130	04/04/2018 1059
1,1-Dichloroethene	50	59		1	118	70-130	04/04/2018 1059
cis-1,2-Dichloroethene	50	53		1	106	70-130	04/04/2018 1059
trans-1,2-Dichloroethene	50	55		1	110	70-130	04/04/2018 1059
1,2-Dichloropropane	50	53		1	106	70-130	04/04/2018 1059
cis-1,3-Dichloropropene	50	53		1	106	70-130	04/04/2018 1059
trans-1,3-Dichloropropene	50	51		1	103	70-130	04/04/2018 1059
Ethylbenzene	50	52		1	104	70-130	04/04/2018 1059
2-Hexanone	100	97		1	97	70-130	04/04/2018 1059
Isopropylbenzene	50	52		1	104	70-130	04/04/2018 1059
Methyl acetate	50	63		1	127	70-130	04/04/2018 1059
Methyl tertiary butyl ether (MTBE)	50	53		1	107	70-130	04/04/2018 1059
4-Methyl-2-pentanone	100	100		1	100	70-130	04/04/2018 1059
Methylcyclohexane	50	55		1	109	70-130	04/04/2018 1059
Methylene chloride	50	51		1	103	70-130	04/04/2018 1059
Styrene	50	52		1	105	70-130	04/04/2018 1059
1,1,2,2-Tetrachloroethane	50	49		1	99	70-130	04/04/2018 1059
Tetrachloroethene	50	52		1	105	70-130	04/04/2018 1059
Toluene	50	54		1	107	70-130	04/04/2018 1059
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	55		1	111	70-130	04/04/2018 1059
1,2,4-Trichlorobenzene	50	48		1	96	70-130	04/04/2018 1059
1,1,1-Trichloroethane	50	54		1	107	70-130	04/04/2018 1059
1,1,2-Trichloroethane	50	50		1	100	70-130	04/04/2018 1059

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: TQ68708-002

Matrix: Solid

Batch: 68708

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	54		1	107	70-130	04/04/2018 1059
Trichlorofluoromethane	50	46		1	93	70-130	04/04/2018 1059
Vinyl chloride	50	54		1	108	70-130	04/04/2018 1059
Xylenes (total)	100	100		1	101	70-130	04/04/2018 1059
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		105	53-142				
Bromofluorobenzene		111	47-138				
Toluene-d8		112	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and \geq DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MS

Sample ID: TC30002-027MS

Matrix: Solid

Batch: 68708

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	190	140	270	N	1	60	70-130	04/04/2018 2053
Benzene	ND	71	64		1	90	70-130	04/04/2018 2053
Bromodichloromethane	ND	71	57		1	80	70-130	04/04/2018 2053
Bromoform	ND	71	62		1	87	70-130	04/04/2018 2053
Bromomethane (Methyl bromide)	ND	71	63		1	88	70-130	04/04/2018 2053
2-Butanone (MEK)	ND	140	100		1	71	70-130	04/04/2018 2053
Carbon disulfide	ND	71	85		1	120	70-130	04/04/2018 2053
Carbon tetrachloride	ND	71	70		1	98	70-130	04/04/2018 2053
Chlorobenzene	ND	71	63		1	89	70-130	04/04/2018 2053
Chloroethane	ND	71	62		1	87	70-130	04/04/2018 2053
Chloroform	ND	71	62		1	87	70-130	04/04/2018 2053
Chloromethane (Methyl chloride)	ND	71	76		1	107	60-140	04/04/2018 2053
Cyclohexane	ND	71	74		1	104	70-130	04/04/2018 2053
1,2-Dibromo-3-chloropropane (DBCP)	ND	71	58		1	82	70-130	04/04/2018 2053
Dibromochloromethane	ND	71	59		1	83	70-130	04/04/2018 2053
1,2-Dibromoethane (EDB)	ND	71	59		1	84	70-130	04/04/2018 2053
1,2-Dichlorobenzene	ND	71	60		1	85	70-130	04/04/2018 2053
1,3-Dichlorobenzene	ND	71	61		1	86	70-130	04/04/2018 2053
1,4-Dichlorobenzene	ND	71	58		1	81	70-130	04/04/2018 2053
Dichlorodifluoromethane	ND	71	78		1	110	60-140	04/04/2018 2053
1,1-Dichloroethane	ND	71	64		1	89	70-130	04/04/2018 2053
1,2-Dichloroethane	ND	71	59		1	82	70-130	04/04/2018 2053
1,1-Dichloroethene	ND	71	77		1	108	70-130	04/04/2018 2053
cis-1,2-Dichloroethene	14	71	83		1	97	70-130	04/04/2018 2053
trans-1,2-Dichloroethene	ND	71	68		1	96	70-130	04/04/2018 2053
1,2-Dichloropropane	ND	71	59		1	83	70-130	04/04/2018 2053
cis-1,3-Dichloropropene	ND	71	57		1	81	70-130	04/04/2018 2053
trans-1,3-Dichloropropene	ND	71	58		1	82	70-130	04/04/2018 2053
Ethylbenzene	ND	71	65		1	92	70-130	04/04/2018 2053
2-Hexanone	ND	140	100		1	72	70-130	04/04/2018 2053
Isopropylbenzene	ND	71	68		1	96	70-130	04/04/2018 2053
Methyl acetate	ND	71	84		1	118	70-130	04/04/2018 2053
Methyl tertiary butyl ether (MTBE)	ND	71	56		1	79	70-130	04/04/2018 2053
4-Methyl-2-pentanone	ND	140	110		1	80	70-130	04/04/2018 2053
Methylcyclohexane	ND	71	77		1	109	70-130	04/04/2018 2053
Methylene chloride	17	71	67		1	71	70-130	04/04/2018 2053
Styrene	190	71	330	N	1	195	70-130	04/04/2018 2053
1,1,2,2-Tetrachloroethane	ND	71	61		1	86	70-130	04/04/2018 2053
Tetrachloroethene	ND	71	73		1	103	70-130	04/04/2018 2053
Toluene	ND	71	68		1	96	70-130	04/04/2018 2053
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	71	81		1	114	70-130	04/04/2018 2053
1,2,4-Trichlorobenzene	ND	71	48	N	1	68	70-130	04/04/2018 2053
1,1,1-Trichloroethane	ND	71	69		1	98	70-130	04/04/2018 2053
1,1,2-Trichloroethane	ND	71	58		1	82	70-130	04/04/2018 2053

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MS

Sample ID: TC30002-027MS

Matrix: Solid

Batch: 68708

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	ND	71	65		1	92	70-130	04/04/2018 2053
Trichlorofluoromethane	ND	71	73		1	103	70-130	04/04/2018 2053
Vinyl chloride	ND	71	73		1	102	70-130	04/04/2018 2053
Xylenes (total)	ND	140	130		1	90	70-130	04/04/2018 2053
Surrogate	Q	% Rec	Acceptance Limit					
1,2-Dichloroethane-d4		98	53-142					
Bromofluorobenzene		111	47-138					
Toluene-d8		116	68-124					

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - Duplicate

Sample ID: TC30002-029DU

Matrix: Solid

Batch: 68708

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Result (ug/kg)	Q	Dil	% RPD	% RPD Limit	Analysis Date
Acetone	360	220	+	1	47	20	04/04/2018 2031
Benzene	ND	ND		1	0.00	20	04/04/2018 2031
Bromodichloromethane	ND	ND		1	0.00	20	04/04/2018 2031
Bromoform	ND	ND		1	0.00	20	04/04/2018 2031
Bromomethane (Methyl bromide)	ND	ND		1	0.00	20	04/04/2018 2031
2-Butanone (MEK)	ND	ND		1	0.00	20	04/04/2018 2031
Carbon disulfide	ND	ND		1	0.00	20	04/04/2018 2031
Carbon tetrachloride	ND	ND		1	0.00	20	04/04/2018 2031
Chlorobenzene	ND	ND		1	0.00	20	04/04/2018 2031
Chloroethane	ND	ND		1	0.00	20	04/04/2018 2031
Chloroform	ND	ND		1	0.00	20	04/04/2018 2031
Chloromethane (Methyl chloride)	ND	ND		1	0.00	20	04/04/2018 2031
Cyclohexane	ND	ND		1	0.00	20	04/04/2018 2031
1,2-Dibromo-3-chloropropane (DBCP)	ND	ND		1	0.00	20	04/04/2018 2031
Dibromochloromethane	ND	ND		1	0.00	20	04/04/2018 2031
1,2-Dibromoethane (EDB)	ND	ND		1	0.00	20	04/04/2018 2031
1,2-Dichlorobenzene	ND	ND		1	0.00	20	04/04/2018 2031
1,3-Dichlorobenzene	ND	ND		1	0.00	20	04/04/2018 2031
1,4-Dichlorobenzene	ND	ND		1	0.00	20	04/04/2018 2031
Dichlorodifluoromethane	ND	ND		1	0.00	20	04/04/2018 2031
1,1-Dichloroethane	ND	ND		1	0.00	20	04/04/2018 2031
1,2-Dichloroethane	ND	ND		1	0.00	20	04/04/2018 2031
1,1-Dichloroethene	ND	ND		1	0.00	20	04/04/2018 2031
cis-1,2-Dichloroethene	ND	ND		1	0.00	20	04/04/2018 2031
trans-1,2-Dichloroethene	ND	ND		1	0.00	20	04/04/2018 2031
1,2-Dichloropropane	ND	ND		1	0.00	20	04/04/2018 2031
cis-1,3-Dichloropropene	ND	ND		1	0.00	20	04/04/2018 2031
trans-1,3-Dichloropropene	ND	ND		1	0.00	20	04/04/2018 2031
Ethylbenzene	ND	ND		1	0.00	20	04/04/2018 2031
2-Hexanone	ND	ND		1	0.00	20	04/04/2018 2031
Isopropylbenzene	ND	ND		1	0.00	20	04/04/2018 2031
Methyl acetate	ND	ND		1	0.00	20	04/04/2018 2031
Methyl tertiary butyl ether (MTBE)	ND	ND		1	0.00	20	04/04/2018 2031
4-Methyl-2-pentanone	ND	ND		1	0.00	20	04/04/2018 2031
Methylcyclohexane	ND	ND		1	0.00	20	04/04/2018 2031
Methylene chloride	9.6	5.1	+	1	61	20	04/04/2018 2031
Styrene	170	110	+	1	46	20	04/04/2018 2031
1,1,2,2-Tetrachloroethane	ND	ND		1	0.00	20	04/04/2018 2031
Tetrachloroethene	ND	ND		1	0.00	20	04/04/2018 2031
Toluene	ND	ND		1	0.00	20	04/04/2018 2031
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND		1	0.00	20	04/04/2018 2031
1,2,4-Trichlorobenzene	ND	ND		1	0.00	20	04/04/2018 2031
1,1,1-Trichloroethane	ND	ND		1	0.00	20	04/04/2018 2031
1,1,2-Trichloroethane	ND	ND		1	0.00	20	04/04/2018 2031

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - Duplicate

Sample ID: TC30002-029DU

Matrix: Solid

Batch: 68708

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Result (ug/kg)	Q	Dil	% RPD	% RPD Limit	Analysis Date
Trichloroethene	14	11	+	1	25	20	04/04/2018 2031
Trichlorofluoromethane	ND	ND		1	0.00	20	04/04/2018 2031
Vinyl chloride	ND	ND		1	0.00	20	04/04/2018 2031
Xylenes (total)	ND	ND		1	0.00	20	04/04/2018 2031
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		110	53-142				
Bromofluorobenzene		114	47-138				
Toluene-d8		113	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: TQ68777-001

Matrix: Aqueous

Batch: 68777

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	04/04/2018 2153
Benzene	ND		1	5.0	0.40	ug/L	04/04/2018 2153
Bromodichloromethane	ND		1	5.0	0.40	ug/L	04/04/2018 2153
Bromoform	ND		1	5.0	0.40	ug/L	04/04/2018 2153
Bromomethane (Methyl bromide)	ND		1	5.0	0.49	ug/L	04/04/2018 2153
2-Butanone (MEK)	ND		1	10	2.0	ug/L	04/04/2018 2153
Carbon disulfide	ND		1	5.0	0.40	ug/L	04/04/2018 2153
Carbon tetrachloride	ND		1	5.0	0.40	ug/L	04/04/2018 2153
Chlorobenzene	ND		1	5.0	0.40	ug/L	04/04/2018 2153
Chloroethane	ND		1	5.0	0.53	ug/L	04/04/2018 2153
Chloroform	ND		1	5.0	0.40	ug/L	04/04/2018 2153
Chloromethane (Methyl chloride)	ND		1	5.0	0.40	ug/L	04/04/2018 2153
Cyclohexane	ND		1	5.0	0.40	ug/L	04/04/2018 2153
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	0.40	ug/L	04/04/2018 2153
Dibromochloromethane	ND		1	5.0	0.40	ug/L	04/04/2018 2153
1,2-Dibromoethane (EDB)	ND		1	5.0	0.40	ug/L	04/04/2018 2153
1,2-Dichlorobenzene	ND		1	5.0	0.40	ug/L	04/04/2018 2153
1,3-Dichlorobenzene	ND		1	5.0	0.40	ug/L	04/04/2018 2153
1,4-Dichlorobenzene	ND		1	5.0	0.40	ug/L	04/04/2018 2153
Dichlorodifluoromethane	ND		1	5.0	0.40	ug/L	04/04/2018 2153
1,1-Dichloroethane	ND		1	5.0	0.40	ug/L	04/04/2018 2153
1,2-Dichloroethane	ND		1	5.0	0.40	ug/L	04/04/2018 2153
1,1-Dichloroethene	ND		1	5.0	0.40	ug/L	04/04/2018 2153
cis-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	04/04/2018 2153
trans-1,2-Dichloroethene	ND		1	5.0	0.40	ug/L	04/04/2018 2153
1,2-Dichloropropane	ND		1	5.0	0.40	ug/L	04/04/2018 2153
cis-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	04/04/2018 2153
trans-1,3-Dichloropropene	ND		1	5.0	0.40	ug/L	04/04/2018 2153
Ethylbenzene	ND		1	5.0	0.40	ug/L	04/04/2018 2153
2-Hexanone	ND		1	10	2.0	ug/L	04/04/2018 2153
Isopropylbenzene	ND		1	5.0	0.40	ug/L	04/04/2018 2153
Methyl acetate	ND		1	5.0	0.40	ug/L	04/04/2018 2153
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	04/04/2018 2153
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	04/04/2018 2153
Methylcyclohexane	ND		1	5.0	0.40	ug/L	04/04/2018 2153
Methylene chloride	ND		1	5.0	0.40	ug/L	04/04/2018 2153
Styrene	ND		1	5.0	0.41	ug/L	04/04/2018 2153
1,1,2,2-Tetrachloroethane	ND		1	5.0	0.40	ug/L	04/04/2018 2153
Tetrachloroethene	ND		1	5.0	0.40	ug/L	04/04/2018 2153
Toluene	ND		1	5.0	0.40	ug/L	04/04/2018 2153
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	0.42	ug/L	04/04/2018 2153
1,2,4-Trichlorobenzene	ND		1	5.0	0.40	ug/L	04/04/2018 2153
1,1,1-Trichloroethane	ND		1	5.0	0.40	ug/L	04/04/2018 2153
1,1,2-Trichloroethane	ND		1	5.0	0.40	ug/L	04/04/2018 2153

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: TQ68777-001

Matrix: Aqueous

Batch: 68777

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	5.0	0.40	ug/L	04/04/2018 2153
Trichlorofluoromethane	ND		1	5.0	0.50	ug/L	04/04/2018 2153
Vinyl chloride	ND		1	2.0	0.40	ug/L	04/04/2018 2153
Xylenes (total)	ND		1	5.0	0.40	ug/L	04/04/2018 2153
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		100	70-130				
Bromofluorobenzene		105	70-130				
Toluene-d8		105	70-130				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: TQ68777-002

Matrix: Aqueous

Batch: 68777

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	120		1	117	60-140	04/04/2018 2057
Benzene	50	46		1	93	70-130	04/04/2018 2057
Bromodichloromethane	50	47		1	93	70-130	04/04/2018 2057
Bromoform	50	51		1	101	70-130	04/04/2018 2057
Bromomethane (Methyl bromide)	50	48		1	96	70-130	04/04/2018 2057
2-Butanone (MEK)	100	110		1	109	70-130	04/04/2018 2057
Carbon disulfide	50	49		1	97	70-130	04/04/2018 2057
Carbon tetrachloride	50	46		1	91	70-130	04/04/2018 2057
Chlorobenzene	50	48		1	95	70-130	04/04/2018 2057
Chloroethane	50	43		1	86	70-130	04/04/2018 2057
Chloroform	50	45		1	90	70-130	04/04/2018 2057
Chloromethane (Methyl chloride)	50	48		1	96	60-140	04/04/2018 2057
Cyclohexane	50	44		1	88	70-130	04/04/2018 2057
1,2-Dibromo-3-chloropropane (DBCP)	50	51		1	102	70-130	04/04/2018 2057
Dibromochloromethane	50	49		1	98	70-130	04/04/2018 2057
1,2-Dibromoethane (EDB)	50	49		1	98	70-130	04/04/2018 2057
1,2-Dichlorobenzene	50	48		1	96	70-130	04/04/2018 2057
1,3-Dichlorobenzene	50	47		1	95	70-130	04/04/2018 2057
1,4-Dichlorobenzene	50	46		1	92	70-130	04/04/2018 2057
Dichlorodifluoromethane	50	47		1	94	60-140	04/04/2018 2057
1,1-Dichloroethane	50	46		1	92	70-130	04/04/2018 2057
1,2-Dichloroethane	50	47		1	94	70-130	04/04/2018 2057
1,1-Dichloroethene	50	48		1	96	70-130	04/04/2018 2057
cis-1,2-Dichloroethene	50	45		1	91	70-130	04/04/2018 2057
trans-1,2-Dichloroethene	50	46		1	92	70-130	04/04/2018 2057
1,2-Dichloropropane	50	47		1	93	70-130	04/04/2018 2057
cis-1,3-Dichloropropene	50	48		1	95	70-130	04/04/2018 2057
trans-1,3-Dichloropropene	50	49		1	97	70-130	04/04/2018 2057
Ethylbenzene	50	47		1	95	70-130	04/04/2018 2057
2-Hexanone	100	100		1	101	70-130	04/04/2018 2057
Isopropylbenzene	50	49		1	98	70-130	04/04/2018 2057
Methyl acetate	50	58		1	115	70-130	04/04/2018 2057
Methyl tertiary butyl ether (MTBE)	50	46		1	91	70-130	04/04/2018 2057
4-Methyl-2-pentanone	100	97		1	97	70-130	04/04/2018 2057
Methylcyclohexane	50	47		1	95	70-130	04/04/2018 2057
Methylene chloride	50	43		1	85	70-130	04/04/2018 2057
Styrene	50	49		1	97	70-130	04/04/2018 2057
1,1,2,2-Tetrachloroethane	50	50		1	100	70-130	04/04/2018 2057
Tetrachloroethene	50	48		1	96	70-130	04/04/2018 2057
Toluene	50	49		1	97	70-130	04/04/2018 2057
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	47		1	94	70-130	04/04/2018 2057
1,2,4-Trichlorobenzene	50	45		1	90	70-130	04/04/2018 2057
1,1,1-Trichloroethane	50	47		1	93	70-130	04/04/2018 2057
1,1,2-Trichloroethane	50	47		1	95	70-130	04/04/2018 2057

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: TQ68777-002

Matrix: Aqueous

Batch: 68777

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	48		1	95	70-130	04/04/2018 2057
Trichlorofluoromethane	50	46		1	92	70-130	04/04/2018 2057
Vinyl chloride	50	48		1	95	70-130	04/04/2018 2057
Xylenes (total)	100	94		1	94	70-130	04/04/2018 2057

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		100	70-130

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and \geq DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: TQ68864-001

Matrix: Solid

Batch: 68864

Prep Method: 5035 High

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Styrene	ND		1	250	100	ug/kg	04/05/2018 1303
Trichloroethene	ND		1	250	100	ug/kg	04/05/2018 1303
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		111	53-142				
Bromofluorobenzene		113	47-138				
Toluene-d8		115	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: TQ68864-002

Matrix: Solid

Batch: 68864

Prep Method: 5035 High

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Styrene	2500	2600		1	103	70-130	04/05/2018 1241
Trichloroethene	2500	2700		1	109	70-130	04/05/2018 1241
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		105	53-142				
Bromofluorobenzene		110	47-138				
Toluene-d8		113	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and \geq DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: TQ68865-001

Matrix: Solid

Batch: 68865

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	4.0	ug/kg	04/05/2018 1124
Benzene	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Bromodichloromethane	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Bromoform	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Bromomethane (Methyl bromide)	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
2-Butanone (MEK)	ND		1	20	4.0	ug/kg	04/05/2018 1124
Carbon disulfide	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Carbon tetrachloride	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Chlorobenzene	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Chloroethane	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Chloroform	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Chloromethane (Methyl chloride)	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Cyclohexane	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Dibromochloromethane	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
1,2-Dibromoethane (EDB)	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
1,2-Dichlorobenzene	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
1,3-Dichlorobenzene	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
1,4-Dichlorobenzene	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Dichlorodifluoromethane	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
1,1-Dichloroethane	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
1,2-Dichloroethane	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
1,1-Dichloroethene	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
cis-1,2-Dichloroethene	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
trans-1,2-Dichloroethene	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
1,2-Dichloropropane	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
cis-1,3-Dichloropropene	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
trans-1,3-Dichloropropene	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Ethylbenzene	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
2-Hexanone	ND		1	10	4.0	ug/kg	04/05/2018 1124
Isopropylbenzene	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Methyl acetate	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
4-Methyl-2-pentanone	ND		1	10	4.0	ug/kg	04/05/2018 1124
Methylcyclohexane	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Methylene chloride	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Styrene	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
1,1,2,2-Tetrachloroethane	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Tetrachloroethene	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Toluene	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
1,2,4-Trichlorobenzene	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
1,1,1-Trichloroethane	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
1,1,2-Trichloroethane	ND		1	5.0	2.0	ug/kg	04/05/2018 1124

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: TQ68865-001

Matrix: Solid

Batch: 68865

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Trichlorofluoromethane	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Vinyl chloride	ND		1	5.0	2.0	ug/kg	04/05/2018 1124
Xylenes (total)	ND		1	10	4.0	ug/kg	04/05/2018 1124
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		109	53-142				
Bromofluorobenzene		113	47-138				
Toluene-d8		113	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: TQ68865-002

Matrix: Solid

Batch: 68865

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	105	60-140	04/05/2018 1017
Benzene	50	52		1	104	70-130	04/05/2018 1017
Bromodichloromethane	50	49		1	99	70-130	04/05/2018 1017
Bromoform	50	52		1	104	70-130	04/05/2018 1017
Bromomethane (Methyl bromide)	50	48		1	96	70-130	04/05/2018 1017
2-Butanone (MEK)	100	100		1	103	60-140	04/05/2018 1017
Carbon disulfide	50	64		1	128	70-130	04/05/2018 1017
Carbon tetrachloride	50	52		1	104	70-130	04/05/2018 1017
Chlorobenzene	50	51		1	101	70-130	04/05/2018 1017
Chloroethane	50	44		1	88	70-130	04/05/2018 1017
Chloroform	50	51		1	103	70-130	04/05/2018 1017
Chloromethane (Methyl chloride)	50	55		1	109	60-140	04/05/2018 1017
Cyclohexane	50	52		1	103	70-130	04/05/2018 1017
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	94	70-130	04/05/2018 1017
Dibromochloromethane	50	51		1	103	70-130	04/05/2018 1017
1,2-Dibromoethane (EDB)	50	49		1	98	70-130	04/05/2018 1017
1,2-Dichlorobenzene	50	51		1	103	70-130	04/05/2018 1017
1,3-Dichlorobenzene	50	50		1	100	70-130	04/05/2018 1017
1,4-Dichlorobenzene	50	51		1	103	70-130	04/05/2018 1017
Dichlorodifluoromethane	50	53		1	105	60-140	04/05/2018 1017
1,1-Dichloroethane	50	53		1	105	70-130	04/05/2018 1017
1,2-Dichloroethane	50	53		1	105	70-130	04/05/2018 1017
1,1-Dichloroethene	50	57		1	113	70-130	04/05/2018 1017
cis-1,2-Dichloroethene	50	52		1	105	70-130	04/05/2018 1017
trans-1,2-Dichloroethene	50	53		1	106	70-130	04/05/2018 1017
1,2-Dichloropropane	50	51		1	102	70-130	04/05/2018 1017
cis-1,3-Dichloropropene	50	50		1	101	70-130	04/05/2018 1017
trans-1,3-Dichloropropene	50	49		1	98	70-130	04/05/2018 1017
Ethylbenzene	50	51		1	103	70-130	04/05/2018 1017
2-Hexanone	100	100		1	100	70-130	04/05/2018 1017
Isopropylbenzene	50	52		1	104	70-130	04/05/2018 1017
Methyl acetate	50	62		1	124	70-130	04/05/2018 1017
Methyl tertiary butyl ether (MTBE)	50	51		1	103	70-130	04/05/2018 1017
4-Methyl-2-pentanone	100	96		1	96	70-130	04/05/2018 1017
Methylcyclohexane	50	53		1	107	70-130	04/05/2018 1017
Methylene chloride	50	50		1	99	70-130	04/05/2018 1017
Styrene	50	52		1	105	70-130	04/05/2018 1017
1,1,2,2-Tetrachloroethane	50	49		1	99	70-130	04/05/2018 1017
Tetrachloroethene	50	53		1	107	70-130	04/05/2018 1017
Toluene	50	53		1	106	70-130	04/05/2018 1017
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	55		1	110	70-130	04/05/2018 1017
1,2,4-Trichlorobenzene	50	50		1	100	70-130	04/05/2018 1017
1,1,1-Trichloroethane	50	52		1	104	70-130	04/05/2018 1017
1,1,2-Trichloroethane	50	49		1	98	70-130	04/05/2018 1017

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: TQ68865-002

Matrix: Solid

Batch: 68865

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	52		1	105	70-130	04/05/2018 1017
Trichlorofluoromethane	50	50		1	99	70-130	04/05/2018 1017
Vinyl chloride	50	49		1	99	70-130	04/05/2018 1017
Xylenes (total)	100	100		1	101	70-130	04/05/2018 1017
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		103	53-142				
Bromofluorobenzene		115	47-138				
Toluene-d8		115	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and \geq DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCSD

Sample ID: TQ68865-003

Matrix: Solid

Batch: 68865

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	110		1	108	2.3	60-140	20	04/05/2018 1039
Benzene	50	51		1	103	1.2	70-130	20	04/05/2018 1039
Bromodichloromethane	50	50		1	100	1.6	70-130	20	04/05/2018 1039
Bromoform	50	49		1	99	4.7	70-130	20	04/05/2018 1039
Bromomethane (Methyl bromide)	50	50		1	99	3.2	70-130	20	04/05/2018 1039
2-Butanone (MEK)	100	100		1	103	0.093	60-140	20	04/05/2018 1039
Carbon disulfide	50	61		1	122	4.4	70-130	20	04/05/2018 1039
Carbon tetrachloride	50	50		1	100	3.9	70-130	20	04/05/2018 1039
Chlorobenzene	50	51		1	102	0.31	70-130	20	04/05/2018 1039
Chloroethane	50	45		1	91	3.0	70-130	20	04/05/2018 1039
Chloroform	50	51		1	102	1.4	70-130	20	04/05/2018 1039
Chloromethane (Methyl chloride)	50	54		1	109	0.19	60-140	20	04/05/2018 1039
Cyclohexane	50	50		1	100	3.5	70-130	20	04/05/2018 1039
1,2-Dibromo-3-chloropropane (DBCP)	50	46		1	92	2.5	70-130	20	04/05/2018 1039
Dibromochloromethane	50	50		1	100	2.5	70-130	20	04/05/2018 1039
1,2-Dibromoethane (EDB)	50	49		1	99	0.88	70-130	20	04/05/2018 1039
1,2-Dichlorobenzene	50	50		1	100	3.1	70-130	20	04/05/2018 1039
1,3-Dichlorobenzene	50	49		1	97	2.8	70-130	20	04/05/2018 1039
1,4-Dichlorobenzene	50	50		1	100	2.1	70-130	20	04/05/2018 1039
Dichlorodifluoromethane	50	44		1	88	18	60-140	20	04/05/2018 1039
1,1-Dichloroethane	50	51		1	102	2.9	70-130	20	04/05/2018 1039
1,2-Dichloroethane	50	51		1	103	2.4	70-130	20	04/05/2018 1039
1,1-Dichloroethene	50	55		1	109	3.2	70-130	20	04/05/2018 1039
cis-1,2-Dichloroethene	50	52		1	103	1.4	70-130	20	04/05/2018 1039
trans-1,2-Dichloroethene	50	51		1	102	4.0	70-130	20	04/05/2018 1039
1,2-Dichloropropane	50	51		1	103	0.34	70-130	20	04/05/2018 1039
cis-1,3-Dichloropropene	50	49		1	98	3.0	70-130	20	04/05/2018 1039
trans-1,3-Dichloropropene	50	50		1	100	2.3	70-130	20	04/05/2018 1039
Ethylbenzene	50	50		1	99	3.3	70-130	20	04/05/2018 1039
2-Hexanone	100	100		1	101	0.94	70-130	20	04/05/2018 1039
Isopropylbenzene	50	51		1	103	1.3	70-130	20	04/05/2018 1039
Methyl acetate	50	60		1	121	2.7	70-130	20	04/05/2018 1039
Methyl tertiary butyl ether (MTBE)	50	50		1	100	3.0	70-130	20	04/05/2018 1039
4-Methyl-2-pentanone	100	94		1	94	2.7	70-130	20	04/05/2018 1039
Methylcyclohexane	50	51		1	102	5.1	70-130	20	04/05/2018 1039
Methylene chloride	50	49		1	97	1.9	70-130	20	04/05/2018 1039
Styrene	50	51		1	103	2.0	70-130	20	04/05/2018 1039
1,1,2,2-Tetrachloroethane	50	48		1	97	2.2	70-130	20	04/05/2018 1039
Tetrachloroethene	50	50		1	99	7.3	70-130	20	04/05/2018 1039
Toluene	50	52		1	104	2.1	70-130	20	04/05/2018 1039
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	51		1	103	6.7	70-130	20	04/05/2018 1039
1,2,4-Trichlorobenzene	50	48		1	95	4.7	70-130	20	04/05/2018 1039
1,1,1-Trichloroethane	50	51		1	101	3.0	70-130	20	04/05/2018 1039
1,1,2-Trichloroethane	50	49		1	98	0.069	70-130	20	04/05/2018 1039

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - LCSD

Sample ID: TQ68865-003

Matrix: Solid

Batch: 68865

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	51		1	102	2.4	70-130	20	04/05/2018 1039
Trichlorofluoromethane	50	47		1	94	5.0	70-130	20	04/05/2018 1039
Vinyl chloride	50	49		1	99	0.030	70-130	20	04/05/2018 1039
Xylenes (total)	100	100		1	100	0.49	70-130	20	04/05/2018 1039
Surrogate	Q	% Rec	Acceptance Limit						
1,2-Dichloroethane-d4		103	53-142						
Bromofluorobenzene		114	47-138						
Toluene-d8		114	68-124						

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - MB

Sample ID: TQ68915-001

Matrix: Solid

Batch: 68915

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	4.0	ug/kg	04/06/2018 1116
Benzene	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Bromodichloromethane	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Bromoform	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Bromomethane (Methyl bromide)	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
2-Butanone (MEK)	ND		1	20	4.0	ug/kg	04/06/2018 1116
Carbon disulfide	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Carbon tetrachloride	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Chlorobenzene	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Chloroethane	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Chloroform	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Chloromethane (Methyl chloride)	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Cyclohexane	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Dibromochloromethane	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
1,2-Dibromoethane (EDB)	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
1,2-Dichlorobenzene	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
1,3-Dichlorobenzene	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
1,4-Dichlorobenzene	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Dichlorodifluoromethane	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
1,1-Dichloroethane	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
1,2-Dichloroethane	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
1,1-Dichloroethene	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
cis-1,2-Dichloroethene	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
trans-1,2-Dichloroethene	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
1,2-Dichloropropane	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
cis-1,3-Dichloropropene	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
trans-1,3-Dichloropropene	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Ethylbenzene	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
2-Hexanone	ND		1	10	4.0	ug/kg	04/06/2018 1116
Isopropylbenzene	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Methyl acetate	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
4-Methyl-2-pentanone	ND		1	10	4.0	ug/kg	04/06/2018 1116
Methylcyclohexane	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Methylene chloride	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Styrene	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
1,1,2,2-Tetrachloroethane	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Tetrachloroethene	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Toluene	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
1,2,4-Trichlorobenzene	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
1,1,1-Trichloroethane	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
1,1,2-Trichloroethane	ND		1	5.0	2.0	ug/kg	04/06/2018 1116

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - MB

Sample ID: TQ68915-001

Matrix: Solid

Batch: 68915

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Trichlorofluoromethane	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Vinyl chloride	ND		1	5.0	2.0	ug/kg	04/06/2018 1116
Xylenes (total)	ND		1	10	4.0	ug/kg	04/06/2018 1116
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		108	53-142				
Bromofluorobenzene		109	47-138				
Toluene-d8		108	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: TQ68915-002

Matrix: Solid

Batch: 68915

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	100	60-140	04/06/2018 1008
Benzene	50	55		1	110	70-130	04/06/2018 1008
Bromodichloromethane	50	53		1	106	70-130	04/06/2018 1008
Bromoform	50	52		1	104	70-130	04/06/2018 1008
Bromomethane (Methyl bromide)	50	55		1	110	70-130	04/06/2018 1008
2-Butanone (MEK)	100	99		1	99	60-140	04/06/2018 1008
Carbon disulfide	50	68	N	1	136	70-130	04/06/2018 1008
Carbon tetrachloride	50	55		1	110	70-130	04/06/2018 1008
Chlorobenzene	50	52		1	104	70-130	04/06/2018 1008
Chloroethane	50	51		1	101	70-130	04/06/2018 1008
Chloroform	50	54		1	107	70-130	04/06/2018 1008
Chloromethane (Methyl chloride)	50	57		1	114	60-140	04/06/2018 1008
Cyclohexane	50	56		1	112	70-130	04/06/2018 1008
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	93	70-130	04/06/2018 1008
Dibromochloromethane	50	52		1	105	70-130	04/06/2018 1008
1,2-Dibromoethane (EDB)	50	52		1	104	70-130	04/06/2018 1008
1,2-Dichlorobenzene	50	51		1	103	70-130	04/06/2018 1008
1,3-Dichlorobenzene	50	52		1	103	70-130	04/06/2018 1008
1,4-Dichlorobenzene	50	50		1	99	70-130	04/06/2018 1008
Dichlorodifluoromethane	50	50		1	101	60-140	04/06/2018 1008
1,1-Dichloroethane	50	55		1	109	70-130	04/06/2018 1008
1,2-Dichloroethane	50	55		1	110	70-130	04/06/2018 1008
1,1-Dichloroethene	50	60		1	120	70-130	04/06/2018 1008
cis-1,2-Dichloroethene	50	55		1	110	70-130	04/06/2018 1008
trans-1,2-Dichloroethene	50	56		1	112	70-130	04/06/2018 1008
1,2-Dichloropropane	50	53		1	107	70-130	04/06/2018 1008
cis-1,3-Dichloropropene	50	52		1	105	70-130	04/06/2018 1008
trans-1,3-Dichloropropene	50	52		1	104	70-130	04/06/2018 1008
Ethylbenzene	50	53		1	107	70-130	04/06/2018 1008
2-Hexanone	100	95		1	95	70-130	04/06/2018 1008
Isopropylbenzene	50	53		1	106	70-130	04/06/2018 1008
Methyl acetate	50	70	N	1	141	70-130	04/06/2018 1008
Methyl tertiary butyl ether (MTBE)	50	54		1	108	70-130	04/06/2018 1008
4-Methyl-2-pentanone	100	99		1	99	70-130	04/06/2018 1008
Methylcyclohexane	50	56		1	113	70-130	04/06/2018 1008
Methylene chloride	50	53		1	106	70-130	04/06/2018 1008
Styrene	50	53		1	106	70-130	04/06/2018 1008
1,1,2,2-Tetrachloroethane	50	48		1	96	70-130	04/06/2018 1008
Tetrachloroethene	50	54		1	108	70-130	04/06/2018 1008
Toluene	50	54		1	107	70-130	04/06/2018 1008
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	59		1	118	70-130	04/06/2018 1008
1,2,4-Trichlorobenzene	50	50		1	101	70-130	04/06/2018 1008
1,1,1-Trichloroethane	50	54		1	108	70-130	04/06/2018 1008
1,1,2-Trichloroethane	50	50		1	100	70-130	04/06/2018 1008

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - LCS

Sample ID: TQ68915-002

Matrix: Solid

Batch: 68915

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	54		1	108	70-130	04/06/2018 1008
Trichlorofluoromethane	50	52		1	103	70-130	04/06/2018 1008
Vinyl chloride	50	53		1	105	70-130	04/06/2018 1008
Xylenes (total)	100	100		1	104	70-130	04/06/2018 1008
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		105	53-142				
Bromofluorobenzene		114	47-138				
Toluene-d8		112	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

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LOD = Limit of Detection

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Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - LCSD

Sample ID: TQ68915-003

Matrix: Solid

Batch: 68915

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	90		1	90	9.9	60-140	20	04/06/2018 1030
Benzene	50	55		1	109	0.37	70-130	20	04/06/2018 1030
Bromodichloromethane	50	51		1	101	4.4	70-130	20	04/06/2018 1030
Bromoform	50	58		1	115	10	70-130	20	04/06/2018 1030
Bromomethane (Methyl bromide)	50	53		1	106	3.5	70-130	20	04/06/2018 1030
2-Butanone (MEK)	100	94		1	94	5.2	60-140	20	04/06/2018 1030
Carbon disulfide	50	66	N	1	131	3.4	70-130	20	04/06/2018 1030
Carbon tetrachloride	50	52		1	104	5.6	70-130	20	04/06/2018 1030
Chlorobenzene	50	53		1	106	1.9	70-130	20	04/06/2018 1030
Chloroethane	50	48		1	96	5.3	70-130	20	04/06/2018 1030
Chloroform	50	53		1	106	1.8	70-130	20	04/06/2018 1030
Chloromethane (Methyl chloride)	50	58		1	117	2.4	60-140	20	04/06/2018 1030
Cyclohexane	50	52		1	105	6.7	70-130	20	04/06/2018 1030
1,2-Dibromo-3-chloropropane (DBCP)	50	49		1	97	4.0	70-130	20	04/06/2018 1030
Dibromochloromethane	50	52		1	105	0.24	70-130	20	04/06/2018 1030
1,2-Dibromoethane (EDB)	50	52		1	104	0.50	70-130	20	04/06/2018 1030
1,2-Dichlorobenzene	50	52		1	105	2.2	70-130	20	04/06/2018 1030
1,3-Dichlorobenzene	50	51		1	102	0.77	70-130	20	04/06/2018 1030
1,4-Dichlorobenzene	50	52		1	105	5.6	70-130	20	04/06/2018 1030
Dichlorodifluoromethane	50	53		1	106	4.5	60-140	20	04/06/2018 1030
1,1-Dichloroethane	50	52		1	104	4.9	70-130	20	04/06/2018 1030
1,2-Dichloroethane	50	51		1	103	6.6	70-130	20	04/06/2018 1030
1,1-Dichloroethene	50	60		1	119	0.51	70-130	20	04/06/2018 1030
cis-1,2-Dichloroethene	50	54		1	108	1.8	70-130	20	04/06/2018 1030
trans-1,2-Dichloroethene	50	55		1	110	1.5	70-130	20	04/06/2018 1030
1,2-Dichloropropane	50	53		1	105	1.4	70-130	20	04/06/2018 1030
cis-1,3-Dichloropropene	50	52		1	104	0.65	70-130	20	04/06/2018 1030
trans-1,3-Dichloropropene	50	50		1	100	3.7	70-130	20	04/06/2018 1030
Ethylbenzene	50	53		1	106	0.45	70-130	20	04/06/2018 1030
2-Hexanone	100	95		1	95	0.96	70-130	20	04/06/2018 1030
Isopropylbenzene	50	58		1	116	9.6	70-130	20	04/06/2018 1030
Methyl acetate	50	63		1	126	11	70-130	20	04/06/2018 1030
Methyl tertiary butyl ether (MTBE)	50	50		1	101	6.6	70-130	20	04/06/2018 1030
4-Methyl-2-pentanone	100	95		1	95	4.2	70-130	20	04/06/2018 1030
Methylcyclohexane	50	58		1	116	2.8	70-130	20	04/06/2018 1030
Methylene chloride	50	51		1	101	4.6	70-130	20	04/06/2018 1030
Styrene	50	54		1	108	1.7	70-130	20	04/06/2018 1030
1,1,2,2-Tetrachloroethane	50	50		1	99	2.9	70-130	20	04/06/2018 1030
Tetrachloroethene	50	55		1	110	1.2	70-130	20	04/06/2018 1030
Toluene	50	55		1	110	3.0	70-130	20	04/06/2018 1030
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	56		1	113	4.7	70-130	20	04/06/2018 1030
1,2,4-Trichlorobenzene	50	50		1	100	1.1	70-130	20	04/06/2018 1030
1,1,1-Trichloroethane	50	53		1	106	2.2	70-130	20	04/06/2018 1030
1,1,2-Trichloroethane	50	51		1	102	2.5	70-130	20	04/06/2018 1030

LOQ = Limit of Quantitation

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J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

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ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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Volatile Organic Compounds by GC/MS - LCSD

Sample ID: TQ68915-003

Matrix: Solid

Batch: 68915

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	56		1	111	2.8	70-130	20	04/06/2018 1030
Trichlorofluoromethane	50	49		1	97	6.0	70-130	20	04/06/2018 1030
Vinyl chloride	50	55		1	111	5.1	70-130	20	04/06/2018 1030
Xylenes (total)	100	100		1	104	0.093	70-130	20	04/06/2018 1030
Surrogate	Q	% Rec	Acceptance Limit						
1,2-Dichloroethane-d4		102	53-142						
Bromofluorobenzene		120	47-138						
Toluene-d8		112	68-124						

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS - MB

Sample ID: TQ68933-001

Matrix: Solid

Batch: 68933

Prep Method: 5035 High

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
cis-1,2-Dichloroethene	ND		1	250	100	ug/kg	04/05/2018 1303
Styrene	ND		1	250	100	ug/kg	04/05/2018 1303
Trichloroethene	ND		1	250	100	ug/kg	04/05/2018 1303
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		111	53-142				
Bromofluorobenzene		113	47-138				
Toluene-d8		115	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS - LCS

Sample ID: TQ68933-002

Matrix: Solid

Batch: 68933

Prep Method: 5035 High

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
cis-1,2-Dichloroethene	2500	2600		1	105	70-130	04/05/2018 1241
Styrene	2500	2600		1	103	70-130	04/05/2018 1241
Trichloroethene	2500	2700		1	109	70-130	04/05/2018 1241
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		105	53-142				
Bromofluorobenzene		110	47-138				
Toluene-d8		113	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and \geq DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the DL

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

**Chain of Custody
and
Miscellaneous Documents**

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 82831



Client: Accom		Report to Contact: Scott Ross		Telephone No. / E-mail: Scott.Ross@Accom.com		Duplicate No.	
Address: 101 Research Dr		Sampler's Signature: <i>[Signature]</i>		Analysis (Attach for if more space is needed)		Page 1 of 15	
City: Columbia		Printed Name: JAMES LEAHY		Project Name: Stokes Road		TC30002	
State: SC		Zip Code: 29203		F.O. No. 60534283		Date	
Project No. 60534283		Sample ID / Description		Time		Date	
Sample ID / Description		Time		Date		Date	
B-46 (2')		1050		3-29-18		3-29-18	
B-46 (4')		1055		3-29-18		3-29-18	
B-46 (6')		1100		3-29-18		3-29-18	
B-46 (8')		1100		3-29-18		3-29-18	
B-46 (10')		1105		3-29-18		3-29-18	
B-46 (12')		1108		3-29-18		3-29-18	
B-46 (14')		1112		3-29-18		3-29-18	
B-46 (15')		1115		3-29-18		3-29-18	
B-50 (2')		1123		3-29-18		3-29-18	
B-50 (4')		1125		3-29-18		3-29-18	

Turn Around Time Required (Prior lab approval required for expedited TAT.)		Sample Disposal		Possible Hazard Identification		OC Requirements (Specify)	
Standard <input type="checkbox"/> Rush (Specify)		<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Dispose by Lab		<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Poison <input type="checkbox"/> Irritant <input type="checkbox"/> Other			
1. Requisitioned by: Elliot H. Henshaw		Date: 03/29/18		1. Received by		Date	
2. Requisitioned by:		Date:		2. Received by		Date	
3. Requisitioned by:		Date:		3. Received by		Date	
4. Requisitioned by:		Date:		4. Laboratory received by: <i>[Signature]</i>		Date: 3-29-18	

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

Requisitioned on Ice (Circle): Yes No Ice Pack: Yes No Receptor Temp: **3.3** °C

LAB USE ONLY

Document Number: F-AD-133 Effective Date: 08-07-2014

SHEALY ENVIRONMENTAL SERVICES, INC.



Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 82857

Client: <u>Arcam</u> Address: <u>101 Research Dr</u> City: <u>Columbia</u> State: <u>SC</u> Zip Code: <u>29203</u> Project Name: <u>Shake's service</u> Project No.: <u>60534283</u>		Report to Contact: <u>Scott Ross</u> Sampler's Signature: <u>[Signature]</u> Printed Name: <u>Elliot Hearn</u> Job Title: <u>Senior biologist</u>		Telephone No. / E-mail: <u>803-251-1400 / Scott.Ross@shealylab.com</u> Quote No.: <u>TC30002</u> Analysis: (Attach list if more space is needed)	
Sample ID / Description (Containers for each sample may be combined on one line.)		Date:		P.O. No.:	
B-50 (4')		3-29-18		3007	
B-50 (8')		1130		X	
B-50 (10')		1130		X	
B-50 (12')		1135		X	
B-50 (14')		1138		X	
B-50 (15')		1144		X	
B-47 (2')		1153		X	
B-47 (4')		1358		X	
B-47 (6')		1400		X	
B-47 (8')		1405		X	
B-47 (10')		1407		X	
Turn Around Time Required (Prior lab approval required for expedited TAT.) Standard <input type="checkbox"/> Rush <input type="checkbox"/> Special by Lab <input type="checkbox"/>		Sample Disposal: Return to Client <input checked="" type="checkbox"/> Special by Lab <input type="checkbox"/>		Possible Hazard Identification: Non-Hazard <input checked="" type="checkbox"/> Flammable <input type="checkbox"/> Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown <input type="checkbox"/>	
1. Relinquished by <u>Elliot Hearn</u> Date: <u>03/29/18</u> Time: <u>11:49</u>		1. Received by _____ Date: _____ Time: _____		GC Requirements (Specify):	
2. Relinquished by _____ Date: _____ Time: _____		2. Received by _____ Date: _____ Time: _____		Date: _____ Time: _____	
3. Relinquished by _____ Date: _____ Time: _____		3. Received by _____ Date: _____ Time: _____		Date: _____ Time: _____	
4. Relinquished by _____ Date: _____ Time: _____		4. Laboratory received by <u>[Signature]</u> Date: <u>4/29/18</u> Time: <u>1:49</u>		Date: _____ Time: _____	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.		LAB USE ONLY Received on ice (Circled) <u>Yes</u> No _____ Pack _____		Receiver Temp. <u>33</u> °C 3.0 °C	

DISTRIBUTION: WHITE & YELLOW Return to laboratory with Sample(s). PINK-Follow/Client Copy
 Document Number: F-AD-133 Effective Date: 08-01-2014

SHEALY ENVIRONMENTAL SERVICES, INC.



Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
 106 Vantage Point Drive • West Columbia, SC 29172
 Telephone No. 803-791-9700 Fax No. 803-791-9111
 www.shealylab.com

Number 82858

Client Address City Project Name Project No.	Report to Contact Scott Ross Analyst's Signature [Signature] Printed Name Elliott Hering	Telephone No. / E-mail 803-251-4400 / scott.ross@shealy.com Analyte (Attach list if more space is needed)	Quote No. Page 3 of 45 Barcode TC30002 NIMS Remarks / Cooler I.D.
State Zip Code	P.O. No.		
City Columbia State SC Zip Code 29203	Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time
Project Name Shaleyspark	Matrix [X] Solid [] Liquid [] Gas [] Other	Date 3-29-18	Time 1410
Project No. 60534283	No. of Containers by Preservative Type [X] None [] H2O2 [] HNO3 [] H2SO4 [] HCl [] Other	Date 3-29-18	Time 1412
	Possible Hazard Identification [X] Non-Hazard [] Flammable [] Skin Irritant [] Poison [] Unknown	Date 3-29-18	Time 1413
	Turn Around Time Required (Prior lab approval required for expedited MAT.) [X] Standard [] Rush (Specify)	Date 3-29-18	Time 1415
	1. Refrigerated by Elliott Hering	Date 3-29-18	Time 1422
	2. Refrigerated by	Date	Time 1420
	3. Refrigerated by	Date	Time 1425
	4. Refrigerated by	Date	Time 1427
	Note: All samples are retained for four weeks from receipt unless other arrangements are made.	Date 3-29-18	Time 1430
	LAB USE ONLY Received on this (Date) / Yes / No	Receipt Temp.	3-3 °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s). PINK Field/Cient Copy
 Document Number: FAD-133 Effective Date: 06-01-2014

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-12

Page 1 of 1
Effective Date: 02/09/2018

Sample Receipt Checklist (SRC)

Client: AECOM

Cooler Inspected by/date: SBE 1/3/30/18

Lot #: JL30002

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1. Were custody seals present on the cooler?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: _____ Chlorine Strip ID: _____	
Cooler ID / Original temperature upon receipt / Derived (Corrected) temperature upon receipt: <u>133</u> / <u>13.3</u> °C <u>13.0</u> / <u>13.0</u> °C / / °C / / °C	
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>4</u> IR Gun Correction Factor: <u>0</u> °C	
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Ice Packs <input type="checkbox"/> Dry Ice <input type="checkbox"/> None	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	4. Is the commercial courier's packing slip attached to this form?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Were proper custody procedures (relinquished/received) followed?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6. Were sample IDs listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7. Were sample IDs listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8. Was collection date & time listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9. Was collection date & time listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Did all container label information (ID, date, time) agree with the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. Were tests to be performed listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13. Was adequate sample volume available?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼" or 6mm in diameter) in any of the VOA vials?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	19. Were all applicable NH ₃ /TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <u>9746</u>	21. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)	
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H ₂ SO ₄ , HNO ₃ , HCl, NaOH) using SR # _____.	
Time of preservation _____.	
Sample(s) _____ were received with bubbles >6 mm in diameter.	
Samples(s) _____ were received with TRC > 0.5 mg/L (If #19 is <i>no</i>) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: _____.	
SR barcode labels applied by: <u>SBE</u> Date: <u>3/30/18</u>	

Comments: _____

PHASE II RI SOIL VAPOR DATA

AECOM
101 Research Drive
Columbia, SC 29203
Attn: Scott Ross

Passive Soil Gas Survey – Analytical Report
Date: September 29, 2017

Beacon Project No. 3724

Project Reference:	Shakespeare Composition Structures, Newberry, SC
Samplers Installed:	May 30, 31, and June 1, 2017
Samplers Retrieved:	June 14, 2017
Samples Received:	June 16, 2017
Analyses Completed:	June 21, 2017
Laboratory Data Issued:	June 23, 2017

EPA Method 8260C

All samples were successfully analyzed using thermal desorption-gas chromatography/mass spectrometry (TD-GC/MS) instrumentation to target a custom compound list following EPA Method 8260C. Laboratory results are reported in nanograms (ng) of specific compound per sample.

Laboratory QA/QC procedures included internal standards, surrogates, and blanks based on EPA Method 8260C. Analyses and reporting were in accordance with BEACON's Quality Assurance Project Plan.

Reporting limits

The reporting limit (RL) is 10 nanograms (ng) for vinyl chloride, 1,1-dichloroethene, trans-1,2-dichloroethene, cis-1,2-dichloroethene, trichloroethene, and tetrachloroethene; and 25 ng for the remaining individual compounds. **Table 1** provides survey results in nanograms per sampler by sample-point number and compound name. For the six (6) compounds listed above, measurements below the limit of quantitation (10 ng) but above the limit of detection (5 ng) are flagged with a "J." The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Any field sample measurements above the upper calibration standard are estimated; however, these values are reported without qualifiers because all reported measurements are relative to each other and are appropriate to meet the survey objectives of locating source areas and vapor intrusion pathways and defining the lateral extent of contamination.

Calibration Verification

The continuing calibration verification (CCV) values for the calibration check compounds were all within $\pm 20\%$ of the true values as defined by the initial five-point calibration and met the requirements specified in Beacon Environmental's Quality Assurance Project Plan.

Method Blanks/Trip Blanks

Laboratory method blanks are run with each sample batch to identify contamination present in the laboratory. If contamination is detected on a method blank, measurements of identical compounds in that sample batch are flagged in the laboratory report. The laboratory method blanks analyzed in connection with the present samples revealed no contamination.

The trip blank is a sampler prepared, transported, and analyzed with other samples but intentionally not exposed. Any target compounds identified on the trip blanks are reported in the laboratory data. The analyses of the trip blanks (labeled Trip-1 and Trip-2 in **Table 1**) reported none of the targeted compounds.

Ambient Air Control Samples

Ambient-air control samples are field QA/QC samples that serve to identify compounds present in ambient air that may bias field samples during installation and retrieval. In this investigation, AECOM collected four (4) ambient-air control samples (AAB1 through AAB4). These samples were exposed to ambient air for approximately 10-15 seconds during both installation and retrieval of BESURE Samplers (the approximate amount of time that a BESURE Sampler is uncapped and exposed to ambient air while being installed and retrieved). The analyses of the ambient air control samples reported none of the targeted compounds.

Passive Soil-Gas Survey Notes

When sample locations are covered with or near the edge of an artificial surface (*e.g.*, asphalt or concrete), the concentrations of compounds in soil gas are often significantly higher than the concentrations would be if the surfacing were not present. Thus, a reading taken below or near an impermeable surface is much higher than it would be in the absence of such a cap. Therefore, the sample location conditions should be evaluated when comparing results between locations.

Survey findings are exclusive to this project and when the spatial relationships are compared with results of other BEACON Surveys it is necessary to incorporate survey and site information from both investigations (*e.g.*, depth to sources, soil types, porosity, soil moisture, presence of impervious surfacing, sample collection times). BEACON recommends the guidelines stated in **Attachment 1** to establish a relationship between reported soil-gas measurements and actual subsurface contaminant concentrations, which will indicate those measurements representing significant subsurface contamination.

BEACON's passive soil-gas samplers are prepared with two sets of adsorbent cartridges for subsequent duplicate or confirmatory sample analysis. At the client's request, duplicate analysis was performed for four (4) field samples. The field sample duplicates were designated "Dup" following the sample number. When comparing quantitative results, a duplicate correspondence should be considered when the relative percent difference (RPD) between the two samples is less than or equal to 100%. For the purpose of calculating correspondences, all non-detections should be assigned, as a baseline value, the RL for the specific contaminant. Based on these assumptions, a 100% correlation was found between the field sample duplicates and their base samples.

Project Details

Samplers were deployed on May 30, 31, and June 1, 2017, and were retrieved on June 14, 2017. **Attachment 2** describes standard field procedures. Individual deployment and retrieval times will be found in the Chain of Custody Form (**Attachment 3**).

Fifty-two (52) field samples, four (4) field sample duplicates, four (4) ambient air control samples, and two (2) trip blanks were received by BEACON on June 16, 2017. Adsorbent cartridges from the passive samplers were thermally desorbed, then analyzed using gas chromatography/mass spectrometry (GC/MS) equipment, in accordance with EPA Method 8260C, as described in **Attachment 4**. BEACON's laboratory analyzed each sample for the targeted compounds; analyses were completed on June 21, 2017. Following a laboratory review, results were provided on June 23, 2017.

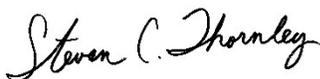
Sample locations are shown on **Figure 1**. The following table lists frequency of detections based on the number of field samples analyzed, the reporting limit, and the maximum value for each mapped compound. The table also includes the transformation and interpolation method for the compound distribution maps provided.

Figure No.	2	3	4
Compound	Trichloroethene	Tetrachloroethene	Total BTEX
Frequency	13	17	48
Reporting Limit (nanograms)	10	10	25
Max Value (nanograms)	13,374	234	34,062
Transformation Method	Log	Log	Log
Interpolation Method	Kriging	Kriging	Kriging

Attachments:

- 1- Applying Results From Passive Soil-Gas Surveys
- 2- Field Procedures
- 3- Chain-of-Custody Form
- 4- Laboratory Procedures

ALL DATA MEET REQUIREMENTS AS SPECIFIED IN THE BEACON ENVIRONMENTAL SERVICES, INC. QUALITY ASSURANCE PROJECT PLAN AND THE RESULTS RELATE ONLY TO THE SAMPLES REPORTED. BEACON ENVIRONMENTAL SERVICES IS ACCREDITED TO ISO/IEC 17025:2005, AND THE WORK PERFORMED WAS IN ACCORDANCE WITH ISO/IEC 17025:2005 REQUIREMENTS, WITH THE EXCEPTION THAT SAMPLES WERE ANALYZED WITHIN A 24-HOUR TUNE WINDOW. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY. RELEASE OF THE DATA CONTAINED IN THIS DATA PACKAGE HAS BEEN AUTHORIZED BY THE LABORATORY DIRECTOR OR HIS SIGNEE, AS VERIFIED BY THE FOLLOWING SIGNATURES:



Steven C. Thornley
 Laboratory Director



Patti J. Riggs
 Quality Manager

Table 1

Beacon Environmental Services, Inc.
 2203A Commerce Road, Suite 1
 Forest Hill, MD 21050 USA

Analysis by EPA Method 8260C

Client Sample ID:	LB170619c	Trip-1	Trip-2	AAB1	AAB2	AAB3
Project Number:		3724	3724	3724	3724	3724
Lab File ID:	C17061903	C17061907	C17061908	C17061909	C17061910	C17061911
Received Date:		6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017
Analysis Date:	6/19/2017	6/19/2017	6/19/2017	6/19/2017	6/19/2017	6/19/2017
Analysis Time:	11:37	13:28	13:50	14:12	14:34	14:56
Matrix:				Air	Air	Air
Units:	ng	ng	ng	ng	ng	ng
COMPOUNDS						
Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
Chloroform	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25	<25
Trichloroethene	<10	<10	<10	<10	<10	<10
1,4-Dioxane	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	<25	<25	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<10	<10	<10	<10	<10	<10
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25
p & m-Xylene	<25	<25	<25	<25	<25	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Values below limit of quantitation (LOQ) but above limit of detection (LOD). B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
 2203A Commerce Road, Suite 1
 Forest Hill, MD 21050 USA

Analysis by EPA Method 8260C

Client Sample ID:	AAB4	SV1	SV2	SV3	SV3-Dup	SV4
Project Number:	3724	3724	3724	3724	3724	3724
Lab File ID:	C17061912	C17061913	C17061914	C17061915	C17061916	C17061917
Received Date:	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017
Analysis Date:	6/19/2017	6/19/2017	6/19/2017	6/19/2017	6/19/2017	6/19/2017
Analysis Time:	15:19	15:42	16:06	16:29	16:50	17:12
Matrix:	Air	Soil Gas				
Units:	ng	ng	ng	ng	ng	ng
COMPOUNDS						
Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
Chloroform	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	29	28	<25	<25	<25
Trichloroethene	<10	<10	<10	<10	<10	<10
1,4-Dioxane	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	45	31	33	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<10	<10	<10	<10	<10	<10
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25
p & m-Xylene	<25	<25	<25	<25	<25	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Values below limit of quantitation (LOQ) but above limit of detection (LOD). B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
 2203A Commerce Road, Suite 1
 Forest Hill, MD 21050 USA

Analysis by EPA Method 8260C

Client Sample ID:	SV6	SV7	SV8	SV9	SV9-Dup	SV10
Project Number:	3724	3724	3724	3724	3724	3724
Lab File ID:	C17061918	C17061919	C17061920	C17061921	C17061922	C17061923
Received Date:	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017
Analysis Date:	6/19/2017	6/19/2017	6/19/2017	6/19/2017	6/19/2017	6/19/2017
Analysis Time:	17:34	17:56	18:18	18:39	19:02	19:24
Matrix:	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Units:	ng	ng	ng	ng	ng	ng
COMPOUNDS						
Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
Chloroform	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	25	<25	<25	32	27	<25
Trichloroethene	<10	<10	<10	<10	<10	<10
1,4-Dioxane	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	27	248	194	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<10	<10	<10	<10	<10	<10
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	37	<25
p & m-Xylene	<25	<25	<25	<25	<25	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Values below limit of quantitation (LOQ) but above limit of detection (LOD). B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA

Analysis by EPA Method 8260C

Client Sample ID:	SV11	SV12	SV13	SV14	SV16	SV17
Project Number:	3724	3724	3724	3724	3724	3724
Lab File ID:	C17061924	C17061925	C17061926	C17061927	C17061928	C17061929
Received Date:	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017
Analysis Date:	6/19/2017	6/19/2017	6/19/2017	6/19/2017	6/19/2017	6/19/2017
Analysis Time:	19:46	20:08	20:30	20:52	21:13	21:35
Matrix:	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Units:	ng	ng	ng	ng	ng	ng
COMPOUNDS						
Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<10	<10	<10	<10	<10	<10
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<10	<10	<10	<10	7 J	<10
Chloroform	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	40	35	<25
Trichloroethene	<10	<10	<10	<10	<10	<10
1,4-Dioxane	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	29	<25	904	103	70	146
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<10	<10	6 J	<10	<10	6 J
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	14,732	361	1,252
p & m-Xylene	<25	<25	36	73	<25	6,426
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	6,896
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	56	93	191
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	112
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	261
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Values below limit of quantitation (LOQ) but above limit of detection (LOD). B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA

Analysis by EPA Method 8260C

Client Sample ID:	SV18	SV19	SV20	SV21	SV22	SV23
Project Number:	3724	3724	3724	3724	3724	3724
Lab File ID:	C17061930	C17061931	C17061932	C17061933	C17061934	C17061935
Received Date:	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017
Analysis Date:	6/19/2017	6/19/2017	6/19/2017	6/19/2017	6/19/2017	6/19/2017
Analysis Time:	21:57	22:19	22:41	23:03	23:25	23:48
Matrix:	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Units:	ng	ng	ng	ng	ng	ng
COMPOUNDS						
Vinyl Chloride	<10	<10	<10	<10	<10	10 J
1,1-Dichloroethene	<10	<10	33	<10	<10	12
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<10	<10	<10	15	<10	58
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	143	<25	<25	<25
cis-1,2-Dichloroethene	<10	<10	<10	113	<10	533
Chloroform	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	613	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	62	125	72	57	66
Trichloroethene	<10	<10	<10	32	<10	128
1,4-Dioxane	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	3,193	75	1,358	2,048	743	1,368
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<10	<10	7 J	<10	<10	<10
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	70	98	359	45	37	46
p & m-Xylene	150	30	96	78	131	76
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	379	180	1,050	29	373
1,3,5-Trimethylbenzene	<25	33	652	<25	<25	<25
1,2,4-Trimethylbenzene	61	87	983	83	69	100
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	88	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Values below limit of quantitation (LOQ) but above limit of detection (LOD). B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA

Analysis by EPA Method 8260C

Client Sample ID:	SV23-Dup	SV24	SV25	SV26	SV27	SV28
Project Number:	3724	3724	3724	3724	3724	3724
Lab File ID:	C17061936	C17061937	C17061938	C17061939	C17061940	S17062110
Received Date:	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017
Analysis Date:	6/20/2017	6/20/2017	6/20/2017	6/20/2017	6/20/2017	6/21/2017
Analysis Time:	0:10	0:32	0:54	1:15	1:37	12:11
Matrix:	Soil Gas					
Units:	ng	ng	ng	ng	ng	ng

COMPOUNDS

Vinyl Chloride	10 J	<10	<10	<10	<10	<10
1,1-Dichloroethene	12	<10	<10	<10	<10	<10
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	57	<10	<10	<10	<10	<10
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	491	10	<10	<10	<10	<10
Chloroform	<25	37	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	60	<25	<25	<25	438	<25
Trichloroethene	117	<10	<10	<10	<10	<10
1,4-Dioxane	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	1,607	1,987	346	32	9,076	792
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<10	<10	<10	<10	<10	<10
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	53	<25	154	29	23,107	41
p & m-Xylene	84	67	44	140	1,442	49
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	373	<25	<25	<25	5,429	39
1,3,5-Trimethylbenzene	<25	<25	<25	<25	932	31
1,2,4-Trimethylbenzene	101	73	77	34	1,848	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Values below limit of quantitation (LOQ) but above limit of detection (LOD). B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA

Analysis by EPA Method 8260C

Client Sample ID:	SV29	SV30	SV31	SV32	SV33	SV34
Project Number:	3724	3724	3724	3724	3724	3724
Lab File ID:	S17062111	S17062112	C17061944	S17062113	C17061946	C17061947
Received Date:	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017
Analysis Date:	6/21/2017	6/21/2017	6/20/2017	6/21/2017	6/20/2017	6/20/2017
Analysis Time:	12:35	12:58	3:05	13:21	3:51	4:13
Matrix:	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Units:	ng	ng	ng	ng	ng	ng
COMPOUNDS						
Vinyl Chloride	<10	<10	15	<10	<10	<10
1,1-Dichloroethene	<10	<10	79	<10	<10	<10
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<10	<10	315	<10	<10	<10
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<10	<10	5,095	<10	<10	<10
Chloroform	<25	<25	66	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	54	<25	<25	34
Trichloroethene	<10	<10	13,374	<10	6 J	<10
1,4-Dioxane	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	138	178	1,224	750	328	1,468
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<10	<10	234	6 J	6 J	<10
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	66	117	127	163	26	75
p & m-Xylene	<25	<25	72	669	<25	38
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	36	<25	<25	33
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Values below limit of quantitation (LOQ) but above limit of detection (LOD). B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA

Analysis by EPA Method 8260C

Client Sample ID:	SV35	SV36	SV37	SV38	SV39	SV40
Project Number:	3724	3724	3724	3724	3724	3724
Lab File ID:	C17061948	C17061949	C17061950	C17061951	C17061952	C17061953
Received Date:	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017
Analysis Date:	6/20/2017	6/20/2017	6/20/2017	6/20/2017	6/20/2017	6/20/2017
Analysis Time:	4:35	4:57	5:18	5:40	6:02	6:24
Matrix:	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Units:	ng	ng	ng	ng	ng	ng
COMPOUNDS						
Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<10	<10	<10	<10	41	<10
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<10	<10	<10	<10	302	<10
Chloroform	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	37	63	37	28	30	35
Trichloroethene	<10	<10	<10	<10	282	16
1,4-Dioxane	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	218	643	5,148	1,612	1,042	797
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<10	<10	<10	<10	124	50
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	268	466	48	106	40	56
p & m-Xylene	29	179	72	37	44	43
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	30	123	<25	<25	39	39
1,3,5-Trimethylbenzene	<25	32	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Values below limit of quantitation (LOQ) but above limit of detection (LOD). B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA

Analysis by EPA Method 8260C

Client Sample ID:	SV41	SV42	SV43	SV44	SV45	SV46
Project Number:	3724	3724	3724	3724	3724	3724
Lab File ID:	C17061954	C17061955	C17061956	C17061957	C17061958	C17061959
Received Date:	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017
Analysis Date:	6/20/2017	6/20/2017	6/20/2017	6/20/2017	6/20/2017	6/20/2017
Analysis Time:	6:46	7:08	7:30	7:52	8:14	8:36
Matrix:	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Units:	ng	ng	ng	ng	ng	ng
COMPOUNDS						
Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<10	<10	<10	<10	<10	5 J
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<10	<10	<10	<10	35	31
Chloroform	<25	<25	<25	82	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	207	<25	<25	<25	41	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	30	35	31	<25	41	34
Trichloroethene	157	27	<10	<10	94	27
1,4-Dioxane	<25	<25	35	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	1,469	2,066	531	6,257	2,565	1,176
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	11	<10	13	<10	104	48
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	30	46	35	28	48	39
p & m-Xylene	29	84	49	60	79	69
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	29	38	176	<25	30	38
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Values below limit of quantitation (LOQ) but above limit of detection (LOD). B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA

Analysis by EPA Method 8260C

Client Sample ID:	SV47	SV47-Dup	SV48	SV49	SV50	LB170620s
Project Number:	3724	3724	3724	3724	3724	
Lab File ID:	C17061960	C17061961	C17061962	C17061963	C17061964	S17062003
Received Date:	6/16/2017	6/16/2017	6/16/2017	6/16/2017	6/16/2017	
Analysis Date:	6/20/2017	6/20/2017	6/20/2017	6/20/2017	6/20/2017	6/20/2017
Analysis Time:	8:57	9:19	9:42	10:04	10:26	15:42
Matrix:	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	
Units:	ng	ng	ng	ng	ng	ng
COMPOUNDS						
Vinyl Chloride	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10	<10
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<10	<10	<10	8 J	<10	<10
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<10	<10	<10	44	<10	<10
Chloroform	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	33	37	32	61	31	<25
Trichloroethene	59	69	<10	<10	<10	<10
1,4-Dioxane	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	5,385	5,745	938	418	948	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<10	9 J	96	99	6 J	<10
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	64	61	45	338	109	<25
p & m-Xylene	92	88	72	308	307	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	41	40	38	137	30	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	62	71	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Values below limit of quantitation (LOQ) but above limit of detection (LOD). B = Detected in method blank.

Table 1

Beacon Environmental Services, Inc.
 2203A Commerce Road, Suite 1
 Forest Hill, MD 21050 USA

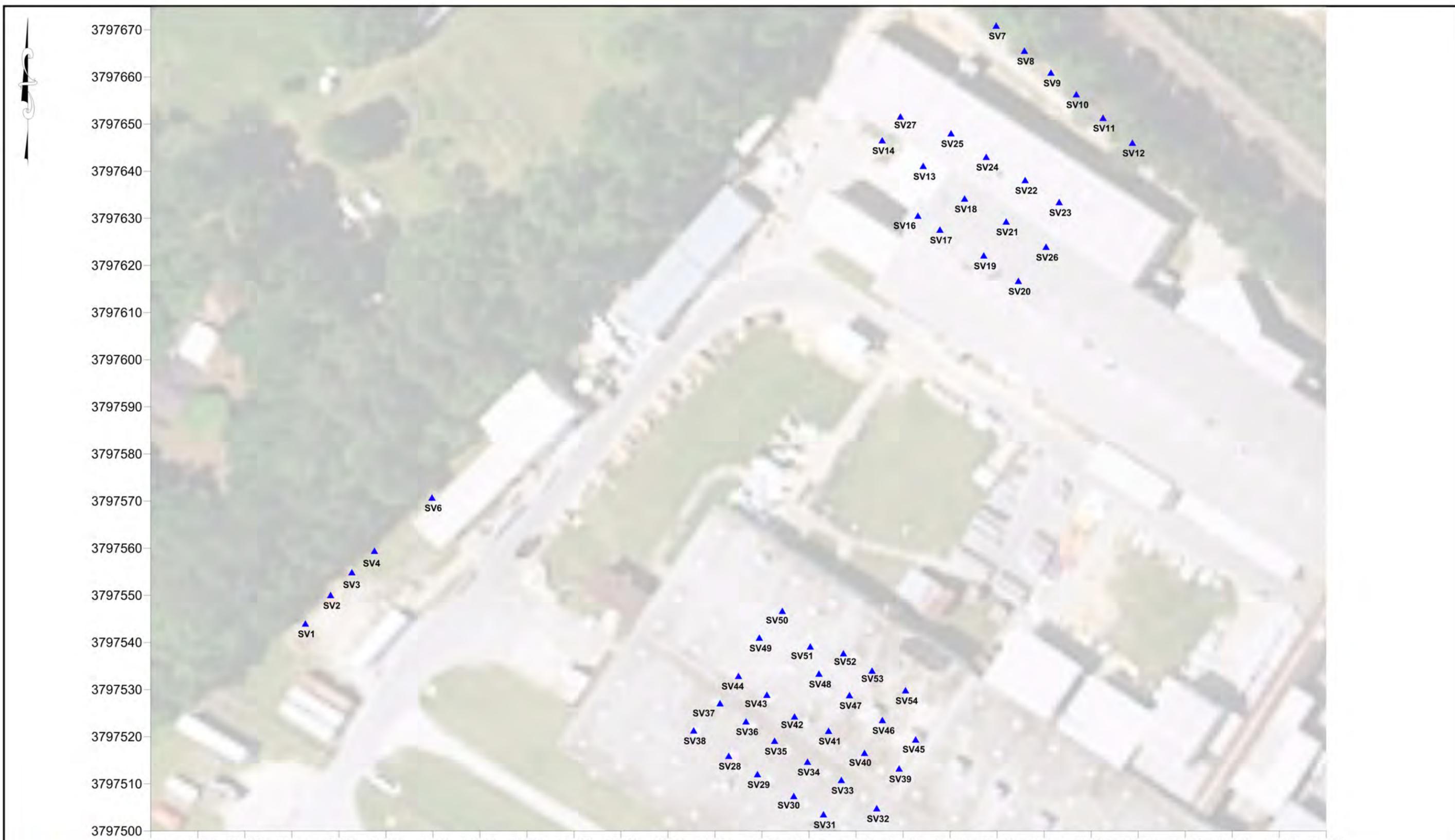
Analysis by EPA Method 8260C

Client Sample ID:	SV51	SV52	SV53	SV54	LB170621s
Project Number:	3724	3724	3724	3724	
Lab File ID:	S17062005	S17062006	S17062007	S17062008	S17062106
Received Date:	6/16/2017	6/16/2017	6/16/2017	6/16/2017	
Analysis Date:	6/20/2017	6/20/2017	6/20/2017	6/20/2017	6/21/2017
Analysis Time:	16:30	16:53	17:16	17:40	10:37
Matrix:	Soil Gas	Soil Gas	Soil Gas	Soil Gas	
Units:	ng	ng	ng	ng	ng

COMPOUNDS

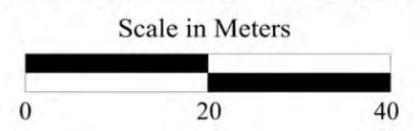
Vinyl Chloride	<10	<10	16	10 J	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<10	<10	11	36	<10
Methyl-t-butyl ether	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<10	6 J	83	208	<10
Chloroform	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	38	<25
Trichloroethene	<10	<10	15	25	<10
1,4-Dioxane	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25
Toluene	282	1,263	305	405	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25
Tetrachloroethene	10 J	<10	<10	60	<10
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25
Ethylbenzene	790	42	48	196	<25
p & m-Xylene	5,987	73	71	661	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25
o-Xylene	10,367	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25
Isopropylbenzene	238	58	44	63	<25
1,3,5-Trimethylbenzene	108	<25	<25	50	<25
1,2,4-Trimethylbenzene	240	<25	<25	175	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25

Results in nanograms (ng). J = Values below limit of quantitation (LOQ) but above limit of detection (LOD). B = Detected in method blank.



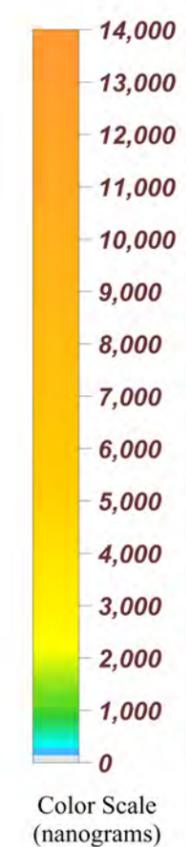
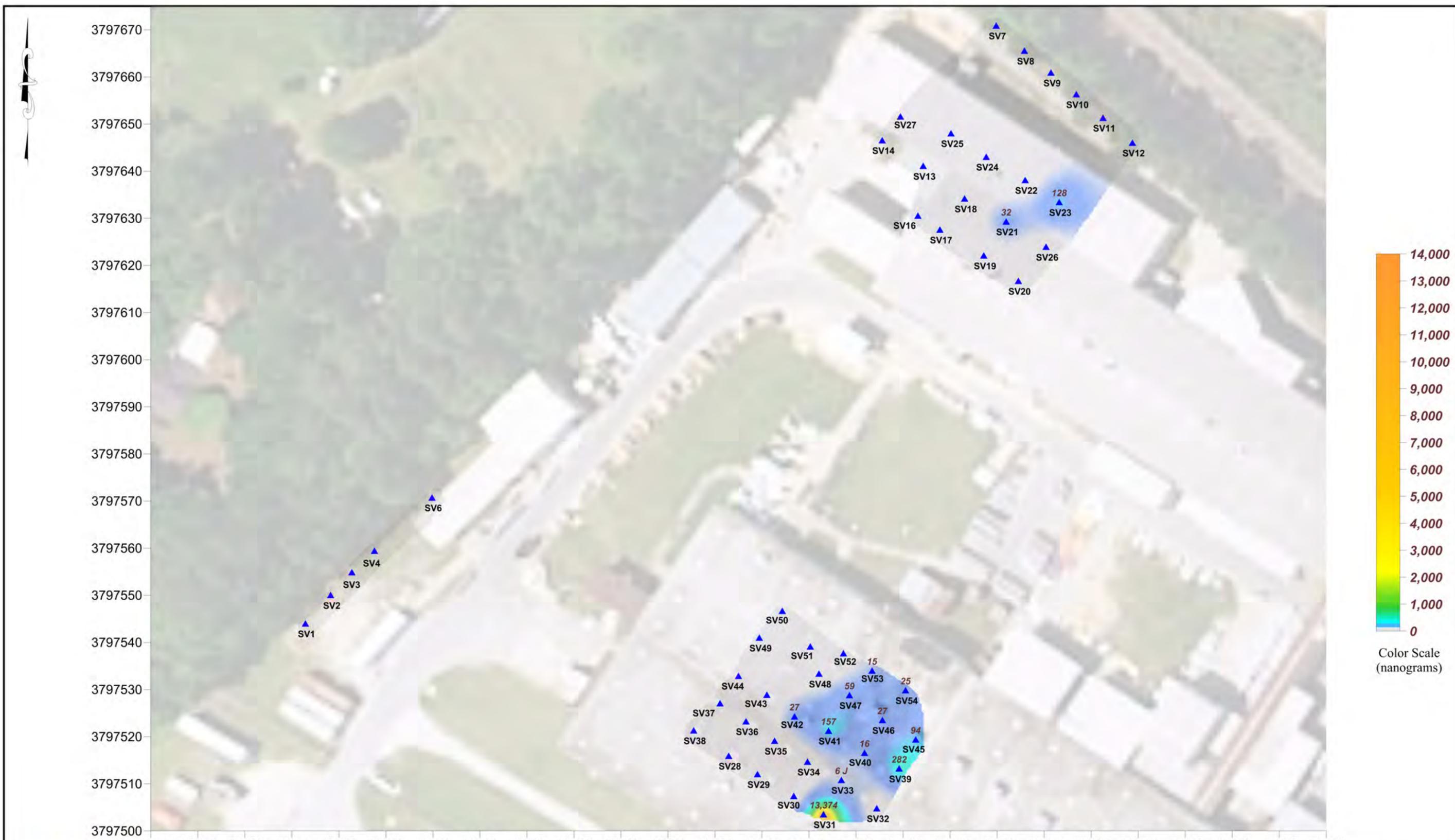
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 www.Beacon-USA.com 1-410-838-8780
 Beacon Project No. 3724 - September 2017

LEGEND
 PASSIVE SOIL-GAS SAMPLE LOCATION
 SV18



System: UTM
 Zone: 17N
 Datum: NAD 1983
 Coordinate Units: Meters

Figure 1
Passive Soil-Gas Survey
Sample Locations
Shakespeare Composition Structures
Newberry, SC



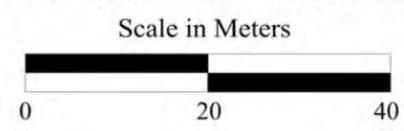
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 Beacon Project No. 3724 - September 2017

LEGEND

8 J NANOGRAMS/SAMPLER (J = Estimated value)

▲ PASSIVE SOIL-GAS SAMPLE LOCATION

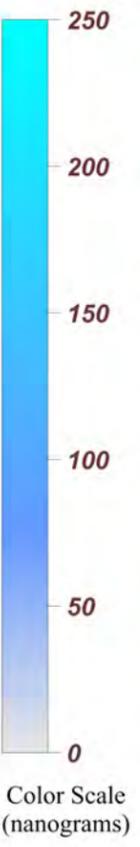
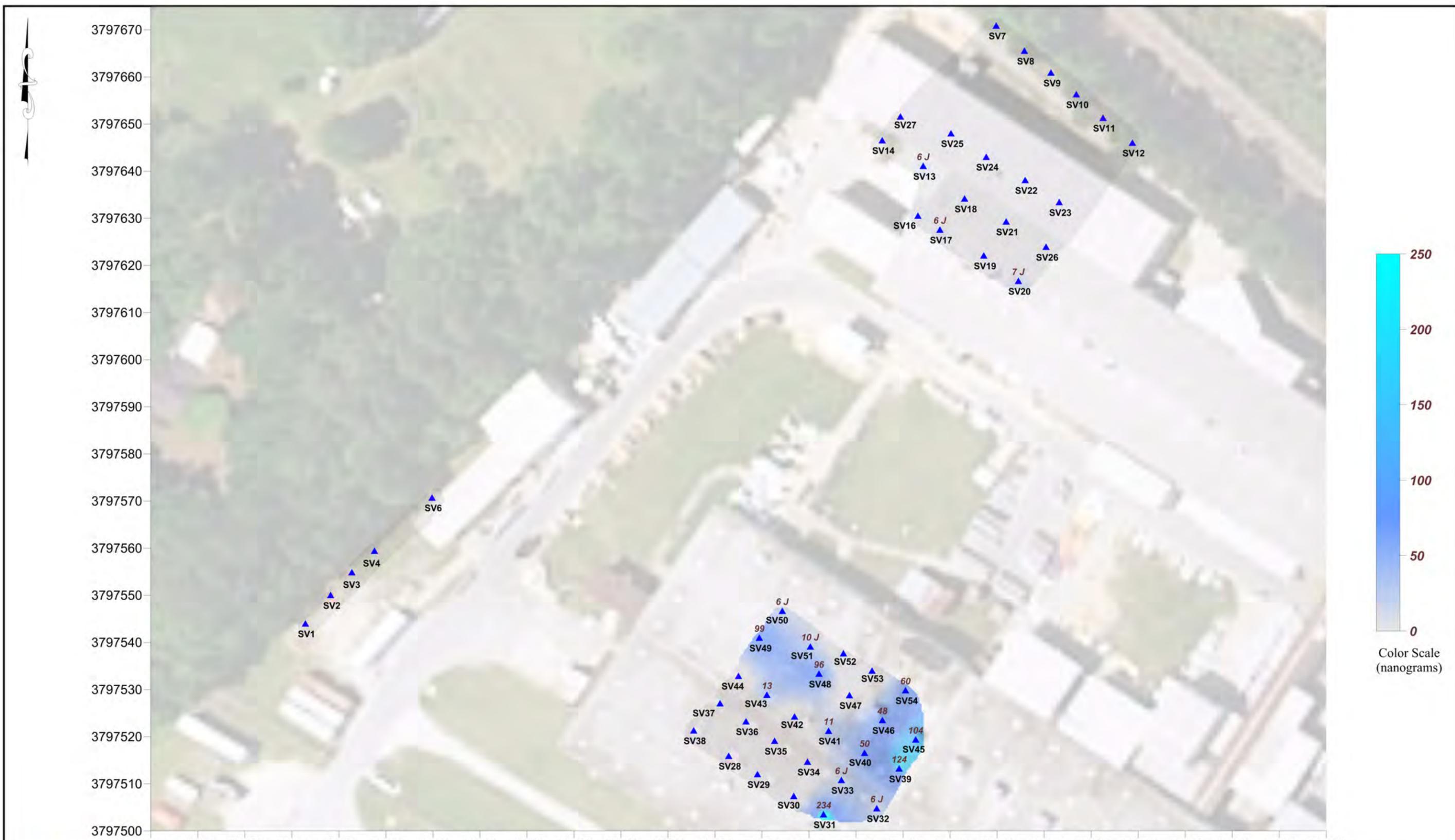
SV18



System: UTM
 Zone: 17N
 Datum: NAD 1983
 Coordinate Units: Meters

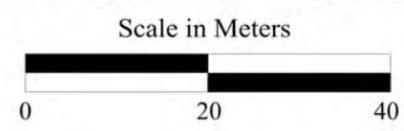
Figure 2
Passive Soil-Gas Survey
Trichloroethene

Shakespeare Composition Structures
Newberry, SC



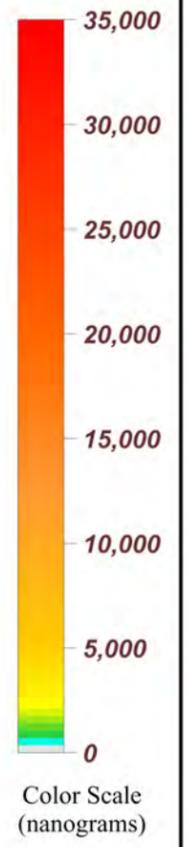
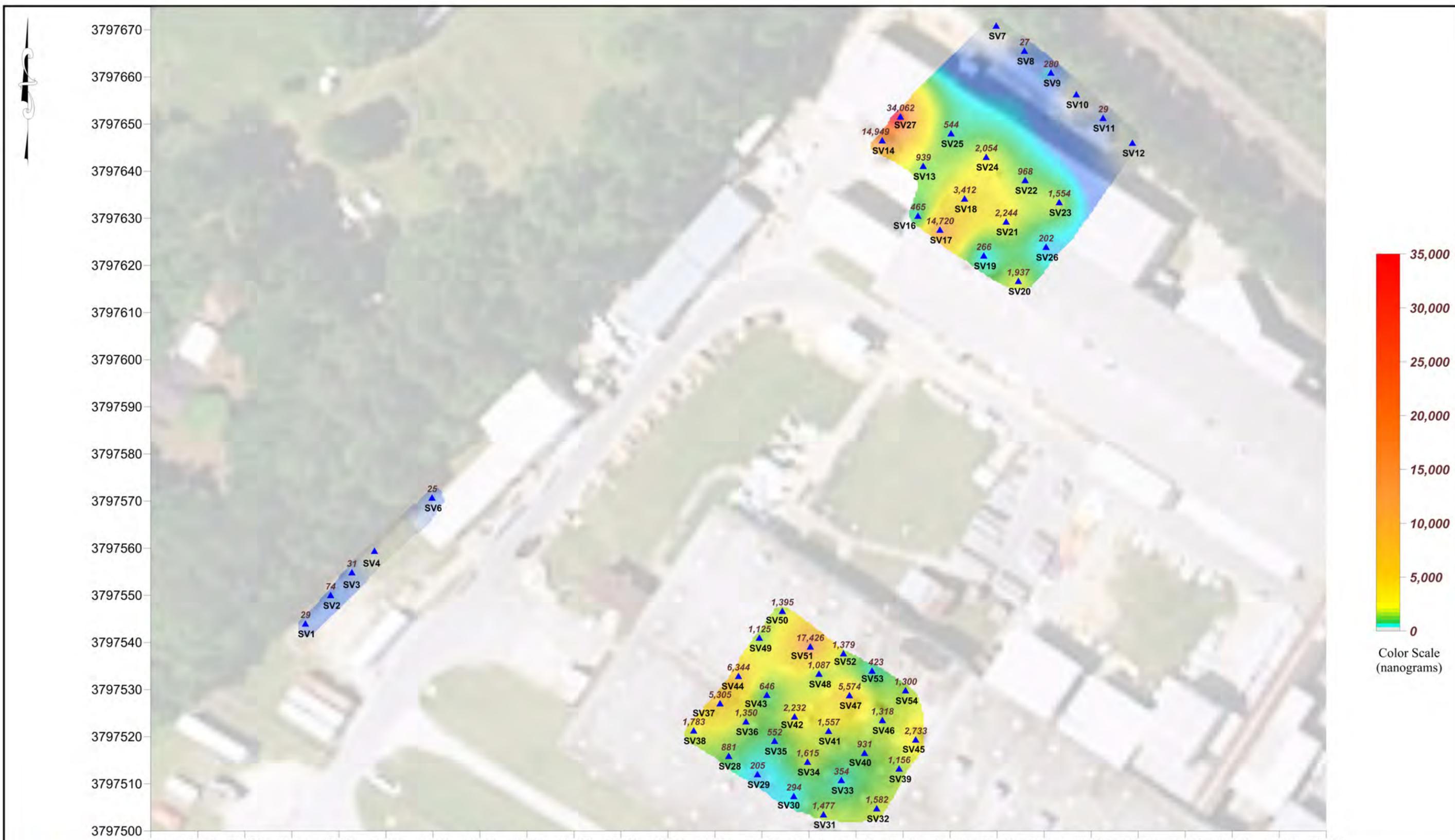
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 Beacon Project No. 3724 - September 2017

LEGEND
 8 J NANOGRAMS/SAMPLER (J = Estimated value)
 ▲ PASSIVE SOIL-GAS SAMPLE LOCATION
 SV18



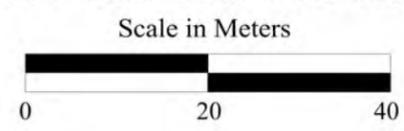
System: UTM
 Zone: 17N
 Datum: NAD 1983
 Coordinate Units: Meters

Figure 3
Passive Soil-Gas Survey
Tetrachloroethene
Shakespeare Composition Structures
Newberry, SC



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LEGEND
 1,000 NANOGRAMS/SAMPLER
 ▲ PASSIVE SOIL-GAS SAMPLE LOCATION
 SV18



System: UTM
 Zone: 17N
 Datum: NAD 1983
 Coordinate Units: Meters

Figure 4
Passive Soil-Gas Survey
Total BTEX
 Shakespeare Composition Structures
 Newberry, SC

Attachments

Attachment 1

APPLYING RESULTS FROM PASSIVE SOIL-GAS SURVEYS

The utility of soil-gas surveys is directly proportional to their accuracy in reflecting and representing changes in the subsurface concentrations of source compounds. Passive soil-gas survey results are the mass collected from the vapor-phase emanating from the source(s). The vapor-phase is merely a fractional trace of the source(s) and, as a matter of convenience, the units used in reporting detection values from passive soil-gas surveys are smaller than those employed for source-compound concentrations.

Passive soil gas data are reported in mass of compounds identified per sample location (e.g., nanograms (ng) or micrograms (μg) per sampler). Results from a passive soil gas survey typically are then used to guide where follow-on intrusive samples should be collected to obtain corresponding concentrations of the contaminants in soil, soil gas, and/or groundwater, as well as eliminate those areas where intrusive samples are not required. It is not practical to report passive soil gas data as concentration because the sampler's uptake rates of the compounds are often greater than the replenishment rates of the compounds around the sampler, which results in low bias measurements, and the replenishment rates will be dependent on several factors that include, at a minimum, soil gas concentrations, soil porosity and permeability, and soil moisture level.

Whatever the relative concentrations of source and associated soil gas, best results are realized when the ratio of soil-gas measurements to actual subsurface concentrations remains as close to constant as the real world permits. It is the reliability and consistency of this ratio, not the particular units of mass (e.g., nanograms) that determine usefulness. Thus, BEACON emphasizes the necessity of conducting — at minimum — follow-on intrusive sampling in areas that show relatively high soil-gas measurements to obtain corresponding concentrations of soil and groundwater contaminants. These correspondent values furnish the basis for approximating a relationship. For extrapolating passive soil gas results to vapor intrusion evaluations, we recommend a minimum of three passive soil gas locations be converted to a shallow vapor well then sampled using an active soil gas method. Once a relationship is established, it can be used in conjunction with the remaining soil-gas measurements to estimate subsurface contaminant concentrations across the survey field. (See www.beacon-usa.com/passivesoilgas.html, Publication 1: *Mass to Concentration Tie-In for PSG Surveys* and Publication 4: *Groundwater and PSG Correlation*.) It is important to keep in mind, however, that specific conditions at individual sample points, including soil porosity and permeability, depth to contamination, and perched ground water, can have an impact on soil-gas measurements at those locations.

When passive soil-gas surveys are utilized as described above, the data provide information that can yield substantial savings in drilling costs and in time. They furnish, among other things, a checklist of compounds expected at each survey location and help to determine how and where drilling budgets can most effectively be spent. Passive soil-gas surveys can also be used as a remediation or general site monitoring tool that can be implemented on a quarterly, semi-annual or annual basis.

Attachment 2

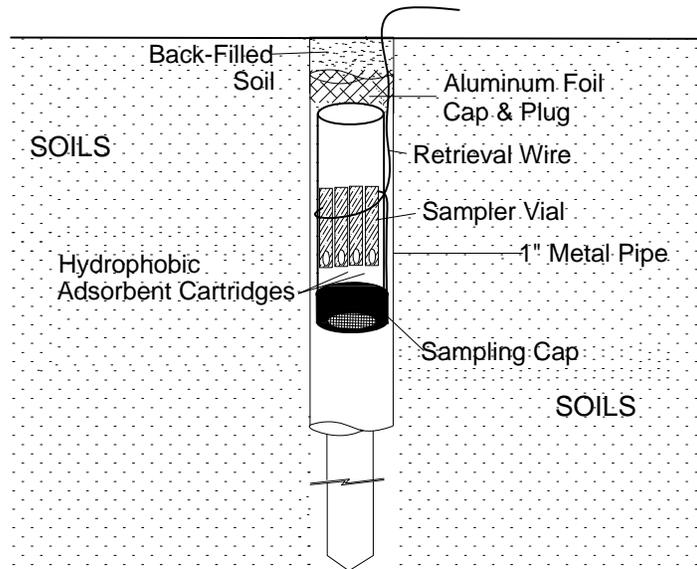
FIELD PROCEDURES FOR PASSIVE SOIL-GAS SURVEYS

The following field procedures are routinely used during a BEACON Passive Soil-Gas Survey. Modifications can be and are incorporated from time to time in response to individual project requirements. In all instances, BEACON adheres to EPA-approved Quality Assurance and Quality Control practices.

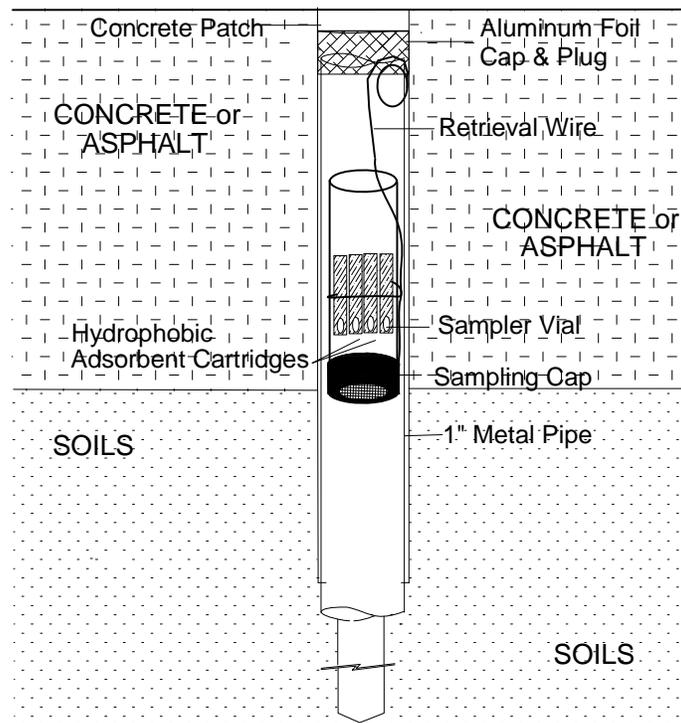
- A. Field personnel carry a BESURE Sample Collection Kit™ and support equipment to the site and deploy the passive samplers in a prearranged survey pattern. A passive sampler consists of a borosilicate glass vial containing hydrophobic adsorbent cartridges with a length of wire attached to the vial for retrieval. Although samplers require only one person for emplacement and retrieval, the specific number of field personnel required depends upon the scope and schedule of the project. Each Sampler emplacement generally takes less than two minutes.
- B. At each survey point a field technician clears vegetation as needed and, using a hammer drill with a 1"- to 1½"-diameter bit, creates a hole 12 to 14 inches deep. [Note: For locations covered with asphalt, concrete, or gravel surfacing, the field technician drills a 1"- to 1½"-diameter hole through the surfacing to the soils beneath]. The technician then, using a hammer drill with a ½" diameter bit, creates a hole three-feet deep. The hole is then sleeved with a 1"-diameter metal sleeve.
- C. The technician then removes the solid plastic cap from a sampler and replaces it with a Sampling Cap (a plastic cap with a hole covered by screen meshing). The technician inserts the sampler, with the Sampling Cap end facing down, into the hole (**see attached figure**). The sampler is then covered with an aluminum foil plug and soils for uncapped locations or, for capped locations, an aluminum foil plug and a concrete patch. The sampler's location, time and date of emplacement, and other relevant information are recorded on the Field Deployment Form.
- D. One or more trip blanks are included as part of the quality-control procedures.
- E. Once all the samplers have been deployed, field personnel schedule sampler recovery and depart, taking all other equipment and materials with them.
- F. Field personnel retrieve the samplers at the end of the exposure period. At each location, a field technician withdraws the sampler from its hole, removes the retrieval wire, and wipes the outside of the vial clean using gauze cloth; following removal of the Sampling Cap, the threads of the vial are also cleaned. A solid plastic cap is screwed onto the vial and the sample location number is written on the label. The technician then records sample-point location, date, time, etc. on the Field Deployment Form.
- G. Sampling holes are refilled with soil, sand, or other suitable material. If samplers have been installed through asphalt or concrete, the hole is filled to grade with a plug of cold patch or cement.
- H. Following retrieval, field personnel ship or transport the passive samplers to BEACON's laboratory.

BEACON'S PASSIVE SOIL-GAS SAMPLER

DEPLOYMENT THROUGH SOILS



DEPLOYMENT THROUGH AN ASPHALT/CONCRETE CAP



Attachment 3
Chain of Custody Form

CHAIN-OF-CUSTODY PASSIVE SOIL-GAS SAMPLES

2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA
P: 1-410-838-8780 | F: 1-410-838-8740

Project Information			Client Information		
Beacon Project No.:	3724	Company Name:	AECONY		
Site Name:	Shakespeare - Newberry	Office Location:	Columbia, SC		
Site Location:	Newberry, SC	Samples Submitted By:	Scott F. Boss		
Analytical Method:	U.S. EPA Method 8260C	Contact Phone No.:	(803) 254-4900		
Target Compounds:	TEL VOCs included in proposal excluding TPH				
Field Sample ID	Date Employed	Date Retrieved	Sampling Hole Depth (Inches)	Type of Surface (Soil/Asphalt/Concrete/Gravel)	Optional Sample Information (e.g., Description of Sample Location, Sample Condition, PID/FID Readings)
	Time Employed	Time Retrieved			
SV1	5/30/17 1110	6/14/2017 0808	36"	Grass	West end of site
SV2	1116	0812		"	
SV3/SV3-Dup	1121	0815		"	
SV4	1125	0817		"	
SV5	1128			"	
SV6	1205	0820		"	Sampler destroyed after deployment
SV7	1315	0828		"	
SV8	1319	0830		"	North end of site
SV9/SV9-Dup	1324	0833		"	
SV10	1329	0838		"	
SV11	1340	0841		"	
SV12	1345			"	
SV13	1400	0947		Concrete	Outside Pole Winder Bldg
SV14	1410	0950		"	
SV15	1421			"	Sampler compromised
SV16	1430	1000		"	
SV17	1525	1012		Concrete	Inside Pole Winder Bldg
SV18	1538	1023		"	
SV19	1550	1028		"	
SV20	1605	1033		"	

Special Notes/Instructions:

Received by: Augusto Benavides
6/16/17
13133

CHAIN-OF-CUSTODY PASSIVE SOIL-GAS SAMPLES

Project Information			Client Information		
Beacon Project No.:	3724	Company Name:	AECOM		
Site Name:	Shakespeare - Newberry	Office Location:	Columbia, SC		
Site Location:	Newberry, SC	Samples Submitted By:	Scott E. Ross		
Analytical Method:	U.S. EPA Method 8260C	Contact Phone No.:	(803) 251-4400		
Target Compounds:	TCL VOCs included in proposal, excluding TPP1				
Field Sample ID	Date Emplaced	Date Retrieved	Sampling Hole Depth (Inches)	Type of Surface (Soil/Asphalt/Concrete/Gravel)	Optional Sample Information (e.g., Description of Sample Location, Sample Condition, PID/FID Readings)
	Time Emplaced	Time Retrieved			
SV21	0915	1040		Concrete	Inside Pole Under Bldg
SV22	0925	1045		"	
SV23/SV23-Rep	0940	1051		"	
SV24	0955	1056 1159		"	
SV25	1010	1044 1058			
SV26	1028	1542			
SV27	1035	1104			
SV28	1330	1338			Inside main Building
SV29	1338	1342			
SV30	1349	1346			
SV31	1410	1350			
SV32	1417	1353			
SV33	1423	1356			
SV34	1430	1358			
SV35	1442	1401			
SV36	1455	1404			Next to active machine
SV37	1510	1408			
SV38	1525	1411			

Special Notes/Instructions:

W W

CHAIN-OF-CUSTODY PASSIVE SOIL-GAS SAMPLES

2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA
P: 1-410-838-8780 | F: 1-410-838-8740

Project Information		Client Information			
Beacon Project No.:	3724	Company Name:	AECOM		
Site Name:	Shakespeare - Nursery	Office Location:	Columbia, SC		
Site Location:	Nursery, SC	Samples Submitted By:	Scott E. Zoss		
Analytical Method:	U.S. EPA Method 8260C	Contact Phone No.:	(803) 254-9700		
Target Compounds:	TCL VOCs included in proposal excluding TPH				
Field Sample ID	Date Emplaced	Date Retrieved	Sampling Hole Depth (inches)	Type of Surface (Soil/Asphalt/Concrete/Gravel)	Optional Sample Information (e.g., Description of Sample Location, Sample Condition, PID/FID Readings)
	Time Emplaced	Time Retrieved			
SV39	0825	1417	36	Concrete	Inside main building
SV40	0822	1437			
SV41	0827	1423			
SV42	0835	1426			
SV43	0842	1428			
SV44	0851	1431			
SV45	0905	1434			
SV46	0955	1440			
SV47/SV47-Dup	1005	1442			
SV48	1013	1445			
SV49	1020	1448			
SV50	1035	1450			
SV51	1048	1452			
SV52	1056	1455			
SV53	1105	1457			
Special Notes/Instructions:	SV54	1120			
Shipment of Field Kit to Laboratory - Custody Seal #					
Relinquished By:	Date/Time	Courier	Intact?	Y	N
<i>Scott E. Zoss</i>	6/15/2017	Fed Ex			
Received By:	Date/Time				

Custody Seal # 0679142

Attachment 4

LABORATORY PROCEDURES FOR PASSIVE SOIL-GAS SAMPLES

Following are laboratory procedures used with BEACON Passive Soil-Gas Surveys, a screening technology for expedited site investigation. After exposure, adsorbent cartridges from the passive samplers are analyzed using U.S. EPA Method 8260C as a guidance document, a capillary gas chromatographic/mass spectrometric method, modified to accommodate high temperature thermal desorption of the adsorbent cartridges and to meet the objectives of reporting semi-quantitative data. This procedure is summarized as follows:

- A. The adsorbent cartridges are loaded with internal standards and surrogates prior to loading the autosampler with the cartridges. The loaded cartridges are purged in a helium flow. Then the cartridges are thermally desorbed in a helium flow onto a focusing trap. Any analytes in the helium stream are adsorbed onto a focusing trap.
 - B. Following trap focusing, the trap is thermally desorbed onto a Rxi-624Sil MS 20m, 0.18 mm ID, 1.00 micron film thickness capillary column.
 - C. The GC/MS is scanned between 35 and 300 Atomic Mass Units (AMU) at 3.12 scans per second.
 - D. BFB tuning criteria and the initial five-point calibration procedures are those stated in method SW846-8260C. System performance and calibration check criteria are met prior to analysis of samples. A laboratory method blank is analyzed after the daily standard to determine that the system is contaminant-free.
 - E. The instrumentation used for these analyses includes:
 - Agilent 7890-5975c Gas Chromatograph/Mass Spectrometer;
 - Markes Unity2 thermal desorber;
 - Markes Ultra2 autosampler; and
 - Markes Mass Flow Controller Modules.
- and
- Agilent 7890-5975c Gas Chromatograph/Mass Spectrometer; and
 - Markes TD100 thermal desorption system.

March 22, 2018

Mr. Scott Ross
AECOM Environment
810 Dutch Square Blvd.
Suite 202
Columbia, SC 29210

RE: Project: Shakespeare-Newberry
Pace Project No.: 92376874

Dear Mr. Ross:

Enclosed are the analytical results for sample(s) received by the laboratory on March 14, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nicole Gasiorowski
nicole.gasiorowski@pacelabs.com
(704)875-9092
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Company Name/Address:
ACOM
 101 Research Drive
 Columbia, SC 29203

Billing Information:
 Same

MO# 92376874



92376874

Report to: **Scott Gross**
 Email To: **scott.gross@acom.com**

Project: **Shakespeare - Newberry**
 City/State: **Newberry, SC**

Description: **Shakespeare - Newberry**
 Client Project #: **60534233 Task 3**

Phone: (803) 254-4400
 Fax: **60534233 Task 3**
 Site/Facility ID #

Collected by (signature): **James Sargent**
 Rush? (Lab MUST Be Notified)
 Same Day 200%
 Next Day 100%
 Two Day 50%
 Three Day 25%

Collected by (print): **James Sargent**
 P.O. # **PO # 99774 ACOM**
 Date Results Needed **Standard Turn**

Sample ID	Sample Description	Can #	Date	Time	Initial	Final	Canister Pressure/Vacuum
SV31		6882	3/13/18	1136	29	20	
SV45		5251		1141	29	10	
SV46		5138		1144	29	7	
SV54		7357		1148	30	4	
SV49		6283		1153	30	5	
SV20		6578		1222	26.5	4	
SV23		5125		1210	30	6	
	Used Canisters						

Report only the following: Benzene, Ethylbenzene, Toluene, m+p Xylene, Oxygene, Cis-1,2 Dichloroethane, Trans-1,2 Dichloroethane, Tetrachloroethene, Trichloroethene, Vinyl Chloride, Isopropylbenzene, 1,2,4 Trimethylbenzene

Relinquished by: (Signature) **Mark Pace** Date: **3/14/18** Time: **08:40**

Relinquished by: (Signature) **Mark Pace** Date: **3/14/18** Time: **13:00**

Relinquished by: (Signature) **Mark Pace** Date: **3/14/18** Time: **13:00**

Received by: (Signature) **Mark Pace** Date: **3/14/18** Time: **13:00**

Chain of Custody Page ___ of ___

IESC
 A B S C I E N C E S
 a subsidiary of Resonance

12065 Lebanon Rd
 Mount Juliet, TN 37112
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



Template: **133615**
 Prelogin: **7643601**
 TSP: **Randy McLean**
 PB: **3/17/18**

Shipped Via: **Ground**

Rem./Contaminant: **Sample # (lab only)**

ACQUANTUM

Table # **92376874**

Condition: (lab use only)

COG Seal Intact: **Y** N NA

pH Checked: **Y** N NA

Pace Analytical - Huntersville, NC

Sample Delivery Group: L977783
Samples Received: 03/15/2018
Project Number: 92376874
Description: Shakespeare-Newberry

Report To: Nicole Gasiorowski
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078

Entire Report Reviewed By:



Nancy McLain
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



Cp: Cover Page	1	1 Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	2 Tc
Cn: Case Narrative	4	
Sr: Sample Results	5	3 Ss
SV31 L977783-01	5	
SV45 L977783-02	6	4 Cn
SV46 L977783-03	7	5 Sr
SV54 L977783-04	8	
SV49 L977783-05	9	6 Qc
SV20 L977783-06	10	
SV23 L977783-07	11	7 Gl
Qc: Quality Control Summary	12	8 Al
Volatile Organic Compounds (MS) by Method TO-15	12	
Gl: Glossary of Terms	14	9 Sc
Al: Accreditations & Locations	15	
Sc: Sample Chain of Custody	16	

SAMPLE SUMMARY



SV31 L977783-01 Air

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by				Collected date/time	Received date/time
				03/13/18 11:36	03/15/18 08:45
Volatile Organic Compounds (MS) by Method TO-15	WG1085590	2	03/17/18 02:09	03/17/18 02:09	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1085910	16	03/17/18 18:13	03/17/18 18:13	MBF

¹ Cp

² Tc

³ Ss

SV45 L977783-02 Air

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by				Collected date/time	Received date/time
				03/13/18 11:41	03/15/18 08:45
Volatile Organic Compounds (MS) by Method TO-15	WG1085590	1	03/16/18 20:28	03/16/18 20:28	AMC

⁴ Cn

⁵ Sr

⁶ Qc

SV46 L977783-03 Air

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by				Collected date/time	Received date/time
				03/13/18 11:44	03/15/18 08:45
Volatile Organic Compounds (MS) by Method TO-15	WG1085590	1	03/16/18 21:20	03/16/18 21:20	AMC

⁷ Gl

⁸ Al

SV54 L977783-04 Air

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by				Collected date/time	Received date/time
				03/13/18 11:48	03/15/18 08:45
Volatile Organic Compounds (MS) by Method TO-15	WG1085590	1	03/16/18 22:12	03/16/18 22:12	AMC

⁹ Sc

SV49 L977783-05 Air

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by				Collected date/time	Received date/time
				03/13/18 11:53	03/15/18 08:45
Volatile Organic Compounds (MS) by Method TO-15	WG1085590	1	03/16/18 23:03	03/16/18 23:03	AMC

SV20 L977783-06 Air

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by				Collected date/time	Received date/time
				03/13/18 12:22	03/15/18 08:45
Volatile Organic Compounds (MS) by Method TO-15	WG1085590	1	03/16/18 23:56	03/16/18 23:56	AMC

SV23 L977783-07 Air

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Collected by				Collected date/time	Received date/time
				03/13/18 12:10	03/15/18 08:45
Volatile Organic Compounds (MS) by Method TO-15	WG1085590	1	03/17/18 00:49	03/17/18 00:49	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1085910	40	03/17/18 19:00	03/17/18 19:00	MBF



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Nancy McLain
Technical Service Representative

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.400	1.28	4.50	14.4		2	WG1085590
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	77.5	307		2	WG1085590
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	2.08	8.24		2	WG1085590
Ethylbenzene	100-41-4	106	0.400	1.73	1.87	8.11		2	WG1085590
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG1085590
Tetrachloroethylene	127-18-4	166	0.400	2.72	4.50	30.6		2	WG1085590
Toluene	108-88-3	92.10	0.400	1.51	11.2	42.1		2	WG1085590
Trichloroethylene	79-01-6	131	3.20	17.1	191	1020		16	WG1085910
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	0.669	3.28		2	WG1085590
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG1085590
m&p-Xylene	1330-20-7	106	0.800	3.47	6.19	26.8		2	WG1085590
o-Xylene	95-47-6	106	0.400	1.73	1.87	8.11		2	WG1085590
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		99.9				WG1085590
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		98.2				WG1085910

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.200	0.639	0.508	1.62		1	WG1085590
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1085590
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1085590
Ethylbenzene	100-41-4	106	0.200	0.867	0.502	2.18		1	WG1085590
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1085590
Tetrachloroethylene	127-18-4	166	0.200	1.36	4.74	32.2		1	WG1085590
Toluene	108-88-3	92.10	0.200	0.753	1.93	7.28		1	WG1085590
Trichloroethylene	79-01-6	131	0.200	1.07	6.70	35.9		1	WG1085590
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.403	1.98		1	WG1085590
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1085590
m&p-Xylene	1330-20-7	106	0.400	1.73	1.76	7.64		1	WG1085590
o-Xylene	95-47-6	106	0.200	0.867	0.500	2.17		1	WG1085590
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		110				WG1085590

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.200	0.639	0.231	0.739		1	WG1085590
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1085590
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1085590
Ethylbenzene	100-41-4	106	0.200	0.867	0.312	1.35		1	WG1085590
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1085590
Tetrachloroethylene	127-18-4	166	0.200	1.36	3.63	24.7		1	WG1085590
Toluene	108-88-3	92.10	0.200	0.753	1.53	5.76		1	WG1085590
Trichloroethylene	79-01-6	131	0.200	1.07	2.73	14.6		1	WG1085590
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.325	1.59		1	WG1085590
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1085590
m&p-Xylene	1330-20-7	106	0.400	1.73	1.03	4.45		1	WG1085590
o-Xylene	95-47-6	106	0.200	0.867	0.354	1.54		1	WG1085590
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		108				WG1085590

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.200	0.639	0.216	0.689		1	WG1085590
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1085590
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1085590
Ethylbenzene	100-41-4	106	0.200	0.867	0.254	1.10		1	WG1085590
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1085590
Tetrachloroethylene	127-18-4	166	0.200	1.36	1.68	11.4		1	WG1085590
Toluene	108-88-3	92.10	0.200	0.753	0.990	3.73		1	WG1085590
Trichloroethylene	79-01-6	131	0.200	1.07	0.702	3.76		1	WG1085590
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.235	1.15		1	WG1085590
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1085590
m&p-Xylene	1330-20-7	106	0.400	1.73	0.820	3.55		1	WG1085590
o-Xylene	95-47-6	106	0.200	0.867	0.313	1.36		1	WG1085590
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		107				WG1085590

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.200	0.639	0.777	2.48		1	WG1085590
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1085590
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1085590
Ethylbenzene	100-41-4	106	0.200	0.867	0.951	4.12		1	WG1085590
Isopropylbenzene	98-82-8	120.20	0.200	0.983	0.577	2.84		1	WG1085590
Tetrachloroethylene	127-18-4	166	0.200	1.36	3.44	23.3		1	WG1085590
Toluene	108-88-3	92.10	0.200	0.753	4.75	17.9		1	WG1085590
Trichloroethylene	79-01-6	131	0.200	1.07	15.5	83.1		1	WG1085590
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.410	2.01		1	WG1085590
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1085590
m&p-Xylene	1330-20-7	106	0.400	1.73	23.6	102		1	WG1085590
o-Xylene	95-47-6	106	0.200	0.867	11.3	48.8		1	WG1085590
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		109				WG1085590

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.200	0.639	2.28	7.28		1	WG1085590
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	0.450	1.78		1	WG1085590
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1085590
Ethylbenzene	100-41-4	106	0.200	0.867	2.02	8.74		1	WG1085590
Isopropylbenzene	98-82-8	120.20	0.200	0.983	1.97	9.70		1	WG1085590
Tetrachloroethylene	127-18-4	166	0.200	1.36	0.588	3.99		1	WG1085590
Toluene	108-88-3	92.10	0.200	0.753	2.74	10.3		1	WG1085590
Trichloroethylene	79-01-6	131	0.200	1.07	0.264	1.41		1	WG1085590
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	2.72	13.3		1	WG1085590
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1085590
m&p-Xylene	1330-20-7	106	0.400	1.73	3.42	14.8		1	WG1085590
o-Xylene	95-47-6	106	0.200	0.867	1.15	4.99		1	WG1085590
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		109				WG1085590

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.200	0.639	2.92	9.34		1	WG1085590
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	0.269	1.07		1	WG1085590
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1085590
Ethylbenzene	100-41-4	106	0.200	0.867	43.3	188		1	WG1085590
Isopropylbenzene	98-82-8	120.20	0.200	0.983	0.563	2.77		1	WG1085590
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1085590
Toluene	108-88-3	92.10	8.00	30.1	42.1	158		40	WG1085910
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1085590
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	1.64	8.07		1	WG1085590
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1085590
m&p-Xylene	1330-20-7	106	16.0	69.4	84.1	365		40	WG1085910
o-Xylene	95-47-6	106	0.200	0.867	14.4	62.3		1	WG1085590
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		102				WG1085590
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		99.8				WG1085910

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3293986-3 03/16/18 09:58

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Benzene	U		0.0460	0.200
cis-1,2-Dichloroethene	U		0.0389	0.200
trans-1,2-Dichloroethene	U		0.0464	0.200
Ethylbenzene	U		0.0506	0.200
Isopropylbenzene	U		0.0563	0.200
Tetrachloroethylene	U		0.0497	0.200
Toluene	U		0.0499	0.200
Trichloroethylene	U		0.0545	0.200
1,2,4-Trimethylbenzene	U		0.0483	0.200
Vinyl chloride	U		0.0457	0.200
m&p-Xylene	U		0.0946	0.400
o-Xylene	U		0.0633	0.200
(S) 1,4-Bromofluorobenzene	96.3			60.0-140

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3293986-1 03/16/18 08:19 • (LCSD) R3293986-2 03/16/18 09:08

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
Vinyl chloride	3.75	4.10	4.17	109	111	70.0-130			1.57	25
trans-1,2-Dichloroethene	3.75	3.99	4.07	107	108	70.0-130			1.79	25
cis-1,2-Dichloroethene	3.75	4.21	4.23	112	113	70.0-130			0.657	25
Benzene	3.75	4.08	4.08	109	109	70.0-130			0.0939	25
Trichloroethylene	3.75	4.07	4.04	108	108	70.0-130			0.594	25
Toluene	3.75	4.15	4.17	111	111	70.0-130			0.571	25
Tetrachloroethylene	3.75	4.01	4.03	107	108	70.0-130			0.598	25
Ethylbenzene	3.75	4.17	4.16	111	111	70.0-130			0.116	25
m&p-Xylene	7.50	8.29	8.29	111	110	70.0-130			0.0846	25
o-Xylene	3.75	4.14	4.15	111	111	70.0-130			0.0286	25
1,2,4-Trimethylbenzene	3.75	3.94	3.94	105	105	70.0-130			0.0857	25
Isopropylbenzene	3.75	4.19	4.17	112	111	70.0-130			0.370	25
(S) 1,4-Bromofluorobenzene				99.2	99.6	60.0-140				



Method Blank (MB)

(MB) R3294391-3 03/17/18 11:02

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Toluene	U		0.0499	0.200
Trichloroethylene	U		0.0545	0.200
m&p-Xylene	U		0.0946	0.400
<i>(S) 1,4-Bromofluorobenzene</i>	96.0			60.0-140

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3294391-1 03/17/18 09:23 • (LCSD) R3294391-2 03/17/18 10:12

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
Trichloroethylene	3.75	4.07	4.12	108	110	70.0-130			1.20	25
Toluene	3.75	4.17	4.19	111	112	70.0-130			0.620	25
m&p-Xylene	7.50	8.33	8.39	111	112	70.0-130			0.734	25
<i>(S) 1,4-Bromofluorobenzene</i>				98.8	99.1	60.0-140				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana ¹	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

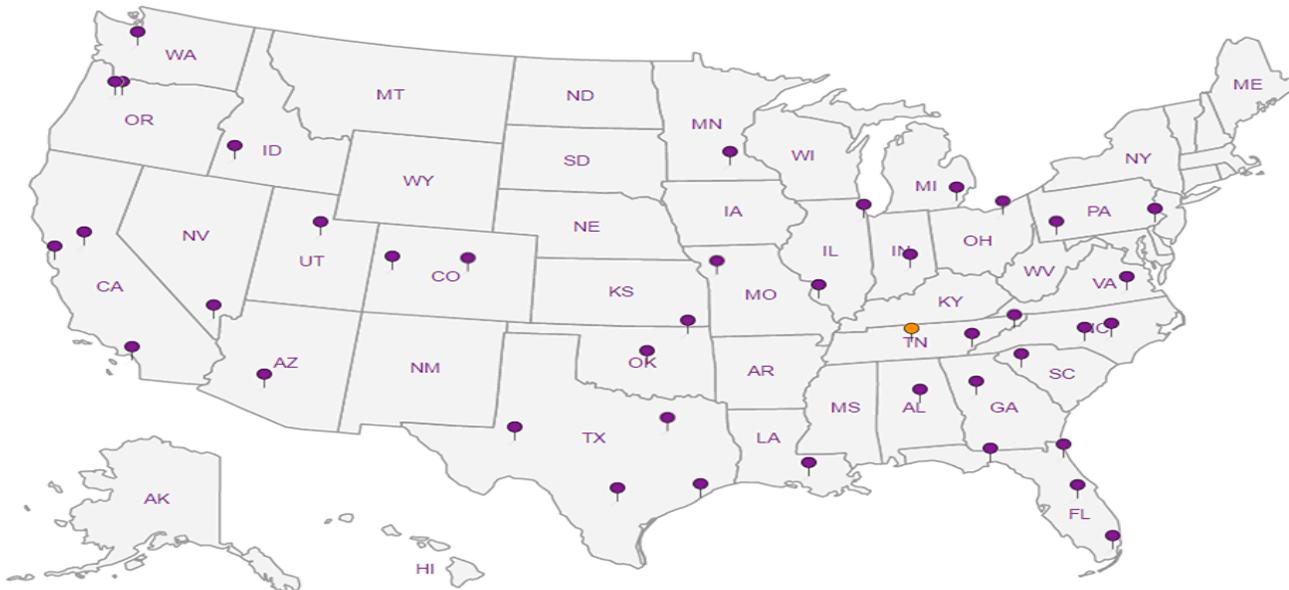
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Chain of Custody



2977783

Workorder: 92376874

Workorder Name: Shakespeare-Newberry

Results Requested By: 3/23/2018

Report / Invoice To		Subcontract To				Requested Analysis																
Nicole Gasiorowski Pace Analytical Charlotte 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 Phone (704)875-9092 Email: nicole.gasiorowski@pacelabs.com		ESC 12065 Lebanon Rd Mt Juliet TN 37122				P.O. # 17095																
State of Sample Origin: SC						TO-15 Cannister Rental/Cleaning Fee																
Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Other																LAB USE ONLY	
1	SV31	3/13/2018 11:36	92376874001	Air																		-01
2	SV45	3/13/2018 11:41	92376874002	Air																		-02
3	SV46	3/13/2018 11:44	92376874003	Air																		-03
4	SV54	3/13/2018 11:48	92376874004	Air																		-04
5	SV49	3/13/2018 11:53	92376874005	Air																		-05
6	SV20	3/13/2018 12:22	92376874006	Air																		-06
7	SV23	3/13/2018 12:10	92376874007	Air																		-07
8	Canister Rental/Cleaning Fee	3/13/2018 00:00	92376874008	Air																		-08
9																						
10																						
11																						
12																						

Transfers					Comments				
Released By	Date/Time	Received By	Date/Time						
<i>[Signature]</i>	3/14/18 8:45	<i>[Signature]</i>	3/15/18 8:45		M091				

Cooler Temperature on Receipt *41* °C
 Custody Seal *Y* or *N*
 Received on Ice *Y* or *N*
 Samples Intact *Y* or *N*

5cc/d @ 8

745898376580 ; 6579

AECOM, SC

Shakespeare, Newberry: TO-15 Compound List

Benzene
Ethylbenzene
Toluene
m&p xylene
o xylene
Cis-1,2 Dichloroethene
Trans -1,2 Dichloroethene
Tetrachloroethene
Trichloroethene
Vinyl Chloride
Isopropylbenzene
1,2,4 Trimethylbenzene

ESC LAB SCIENCES Cooler Receipt Form

Client: <i>PALE</i>	SDG#		
Cooler Received/Opened On: <i>3/15/18</i>	Temperature:	<i>Amb</i>	
Received By: Christian Kacar			
Signature: <i>[Signature]</i>			
Receipt Check List			
	NP	Yes	No
COC Seal Present / Intact?	<i>/</i>		
COC Signed / Accurate?		<i>/</i>	
Bottles arrive intact?		<i>/</i>	
Correct bottles used?		<i>/</i>	
Sufficient volume sent?		<i>/</i>	
If Applicable		<i>/</i>	
VOA Zero headspace?			
Preservation Correct / Checked?			

PHASE II RI WATER WELL DATA

LABORATORY REPORT

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

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STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Montana	CERT0026
Alaska	IN00035	Nebraska	NE-OS-05-04
Arizona	AZ0432	Nevada	IN00035
Arkansas	IN00035	New Hampshire*	2124
California	2920	New Jersey*	IN598
Colorado	IN035	New Mexico	IN00035
Colorado Radiochemistry	IN035	New York*	11398
Connecticut	PH-0132	North Carolina	18700
Delaware	IN035	North Dakota	R-035
Florida*	E87775	Ohio	87775
Georgia	929	Oklahoma	D9508
Hawaii	IN035	Oregon (Primary AB)*	4074-001
Idaho	IN00035	Pennsylvania*	68-00466
Illinois*	200001	Puerto Rico	IN00035
Illinois Microbiology	17767	Rhode Island	LAO00343
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-15-8
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA170006	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	460275
Massachusetts	M-IN035	Washington	C837
Michigan	9926	West Virginia	9927 C
Minnesota*	018-999-338	Wisconsin	999766900
Mississippi	IN035	Wyoming	IN035
Missouri	880		

*NELAP/TNI Recognized Accreditation Bodies

LABORATORY CASE NARRATIVE

Client: Shealy Environmental Services

Report #: 391504QC

All method QC was within acceptance limits, with the exception of:

Method 524.2

See Attached QC Summary Report.

Note: This report may not be reproduced, except in full, without written approval from EEA.

Kelly Groves Analytical Services Manager 07/07/2017

Authorized Signature Title Date

110 South Hill Street
 South Bend, IN 46617
 Tel: (574) 233-4777
 Fax: (574) 233-8207
 1 800 332 4345

Laboratory Report

Client: Shealy Environmental Services

Attn: Nisreen Saikaly
 106 Vantage Point Drive
 West Columbia, SC 29172

Report: 391504
 Priority: Standard Written
 Status: Final
 PWS ID: Not Supplied
 Lab ID #: 95005

Sample Information					
EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3720810	SF22082-009 PW-4	524.2	06/21/17 15:20	Client	06/27/17 08:30
3720811	SF22082-012 Boazman Well	524.2	06/22/17 14:35	Client	06/27/17 08:30
3720812	SF22082-016 LTB	524.2	06/21/17 15:20	Client	06/27/17 08:30

Report Summary

Note: Sample containers were provided by the client.

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Kelly Trott at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

Kelly Trott Analytical Services Manager

Authorized Signature

Title

07/07/2017

Date

Client Name: Shealy Environmental Services

Report #: 391504

Sampling Point: SF22082-009 PW-4

PWS ID: Not Supplied

Volatile Organic Chemicals									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
2990	Benzene	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2993	Bromobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2430	Bromochloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2943	Bromodichloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2942	Bromoform	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2214	Bromomethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2422	n-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2428	sec-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2426	tert-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2982	Carbon tetrachloride	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2989	Chlorobenzene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2216	Chloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2941	Chloroform	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2210	Chloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2965	2-Chlorotoluene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2966	4-Chlorotoluene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2944	Dibromochloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2950	Total Trihalomethanes	524.2	0.08 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2931	1,2-Dibromo-3-chloropropane (DBCP)	524.2	---	0.0002	< 0.0002	mg/L	---	06/28/17 20:18	3720810
2946	1,2-Dibromoethane (EDB)	524.2	---	0.0002	< 0.0002	mg/L	---	06/28/17 20:18	3720810
2408	Dibromomethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2968	1,2-Dichlorobenzene	524.2	0.6 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2967	1,3-Dichlorobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2969	1,4-Dichlorobenzene	524.2	0.075 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
25321-22-6	Total Dichlorobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2212	Dichlorodifluoromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2978	1,1-Dichloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2980	1,2-Dichloroethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2977	1,1-Dichloroethylene	524.2	0.007 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2380	cis-1,2-Dichloroethylene	524.2	0.07 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2979	trans-1,2-Dichloroethylene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2964	Dichloromethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2983	1,2-Dichloropropane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2412	1,3-Dichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2416	2,2-Dichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2410	1,1-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2228	cis-1,3-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2224	trans-1,3-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2413	1,3-Dichloropropylene, cis & trans	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2992	Ethylbenzene	524.2	0.7 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2246	Hexachlorobutadiene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2994	Isopropylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2030	4-Isopropyltoluene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2251	Methyl-t-butyl ether (MTBE)	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2248	Naphthalene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810

2998	n-Propylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2996	Styrene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2986	1,1,1,2-Tetrachloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2988	1,1,2,2-Tetrachloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2987	Tetrachloroethylene	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2991	Toluene	524.2	1 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2420	1,2,3-Trichlorobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2378	1,2,4-Trichlorobenzene	524.2	0.07 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2981	1,1,1-Trichloroethane	524.2	0.2 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2985	1,1,2-Trichloroethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2984	Trichloroethylene	524.2	0.005 *	0.0005	0.0009	mg/L	---	06/28/17 20:18	3720810
2218	Trichlorofluoromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2414	1,2,3-Trichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2418	1,2,4-Trimethylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2424	1,3,5-Trimethylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2976	Vinyl chloride	524.2	0.002 *	0.0002	< 0.0002	mg/L	---	06/28/17 20:18	3720810
2997	1,2-Xylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2963	1,3 + 1,4-Xylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810
2955	Xylenes, Total	524.2	10 *	0.0005	< 0.0005	mg/L	---	06/28/17 20:18	3720810

Compliance monitoring for 1,2-Dibromo-3-chloropropane (DBCP) must be done using EPA method 504.1.

Compliance monitoring for 1,2-Dibromoethane (EDB) must be done using EPA method 504.1.

Sampling Point: SF22082-012 Boazman Well

PWS ID: Not Supplied

Volatile Organic Chemicals									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
2990	Benzene	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2993	Bromobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2430	Bromochloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2943	Bromodichloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2942	Bromoform	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2214	Bromomethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2422	n-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2428	sec-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2426	tert-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2982	Carbon tetrachloride	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2989	Chlorobenzene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2216	Chloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2941	Chloroform	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2210	Chloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2965	2-Chlorotoluene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2966	4-Chlorotoluene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2944	Dibromochloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2950	Total Trihalomethanes	524.2	0.08 *	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2931	1,2-Dibromo-3-chloropropane (DBCP)	524.2	---	0.0002	< 0.0002	mg/L	---	06/28/17 21:24	3720811
2946	1,2-Dibromoethane (EDB)	524.2	---	0.0002	< 0.0002	mg/L	---	06/28/17 21:24	3720811
2408	Dibromomethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2968	1,2-Dichlorobenzene	524.2	0.6 *	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2967	1,3-Dichlorobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2969	1,4-Dichlorobenzene	524.2	0.075 *	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
25321-22-6	Total Dichlorobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2212	Dichlorodifluoromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2978	1,1-Dichloroethane	524.2	---	0.0005	0.0009	mg/L	---	06/28/17 21:24	3720811
2980	1,2-Dichloroethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2977	1,1-Dichloroethylene	524.2	0.007 *	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2380	cis-1,2-Dichloroethylene	524.2	0.07 *	0.0005	0.0019	mg/L	---	06/28/17 21:24	3720811
2979	trans-1,2-Dichloroethylene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2964	Dichloromethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2983	1,2-Dichloropropane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2412	1,3-Dichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2416	2,2-Dichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2410	1,1-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2228	cis-1,3-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2224	trans-1,3-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2413	1,3-Dichloropropylene, cis & trans	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2992	Ethylbenzene	524.2	0.7 *	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2246	Hexachlorobutadiene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2994	Isopropylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2030	4-Isopropyltoluene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2251	Methyl-t-butyl ether (MTBE)	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2248	Naphthalene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811

2998	n-Propylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2996	Styrene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2986	1,1,1,2-Tetrachloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2988	1,1,2,2-Tetrachloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2987	Tetrachloroethylene	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2991	Toluene	524.2	1 *	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2420	1,2,3-Trichlorobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2378	1,2,4-Trichlorobenzene	524.2	0.07 *	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2981	1,1,1-Trichloroethane	524.2	0.2 *	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2985	1,1,2-Trichloroethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2984	Trichloroethylene	524.2	0.005 *	0.0005	0.0015	mg/L	---	06/28/17 21:24	3720811
2218	Trichlorofluoromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2414	1,2,3-Trichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2418	1,2,4-Trimethylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2424	1,3,5-Trimethylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2976	Vinyl chloride	524.2	0.002 *	0.0002	< 0.0002	mg/L	---	06/28/17 21:24	3720811
2997	1,2-Xylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2963	1,3 + 1,4-Xylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811
2955	Xylenes, Total	524.2	10 *	0.0005	< 0.0005	mg/L	---	06/28/17 21:24	3720811

Compliance monitoring for 1,2-Dibromo-3-chloropropane (DBCP) must be done using EPA method 504.1.

Compliance monitoring for 1,2-Dibromoethane (EDB) must be done using EPA method 504.1.

Sampling Point: SF22082-016 LTB

PWS ID: Not Supplied

Volatile Organic Chemicals									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
71-43-2	Benzene	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
108-86-1	Bromobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
74-97-5	Bromochloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
75-27-4	Bromodichloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
75-25-2	Bromoform	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
74-83-9	Bromomethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
104-51-8	n-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
135-98-8	sec-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
98-06-6	tert-Butylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
56-23-5	Carbon tetrachloride	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
108-90-7	Chlorobenzene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
75-00-3	Chloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
67-66-3	Chloroform	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
74-87-3	Chloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
95-49-8	2-Chlorotoluene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
106-43-4	4-Chlorotoluene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
124-48-1	Dibromochloromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
---	Total Trihalomethanes	524.2	0.08 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	524.2	---	0.0002	< 0.0002	mg/L	---	06/28/17 19:44	3720812
106-93-4	1,2-Dibromoethane (EDB)	524.2	---	0.0002	< 0.0002	mg/L	---	06/28/17 19:44	3720812
74-95-3	Dibromomethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
95-50-1	1,2-Dichlorobenzene	524.2	0.6 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
541-73-1	1,3-Dichlorobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
106-46-7	1,4-Dichlorobenzene	524.2	0.075 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
25321-22-6	Total Dichlorobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
75-71-8	Dichlorodifluoromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
75-34-3	1,1-Dichloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
107-06-2	1,2-Dichloroethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
75-35-4	1,1-Dichloroethylene	524.2	0.007 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
156-59-2	cis-1,2-Dichloroethylene	524.2	0.07 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
156-60-5	trans-1,2-Dichloroethylene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
75-09-2	Dichloromethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
78-87-5	1,2-Dichloropropane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
142-28-9	1,3-Dichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
594-20-7	2,2-Dichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
563-58-6	1,1-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
10061-01-5	cis-1,3-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
10061-02-6	trans-1,3-Dichloropropylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
542-75-6	1,3-Dichloropropylene, cis & trans	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
100-41-4	Ethylbenzene	524.2	0.7 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
87-68-3	Hexachlorobutadiene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
98-82-8	Isopropylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
99-87-6	4-Isopropyltoluene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
1634-04-4	Methyl-t-butyl ether (MTBE)	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
91-20-3	Naphthalene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812

103-65-1	n-Propylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
100-42-5	Styrene	524.2	0.1 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
630-20-6	1,1,1,2-Tetrachloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
79-34-5	1,1,2,2-Tetrachloroethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
127-18-4	Tetrachloroethylene	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
108-88-3	Toluene	524.2	1 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
87-61-6	1,2,3-Trichlorobenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
120-82-1	1,2,4-Trichlorobenzene	524.2	0.07 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
71-55-6	1,1,1-Trichloroethane	524.2	0.2 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
79-00-5	1,1,2-Trichloroethane	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
79-01-6	Trichloroethylene	524.2	0.005 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
75-69-4	Trichlorofluoromethane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
96-18-4	1,2,3-Trichloropropane	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
95-63-6	1,2,4-Trimethylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
108-67-8	1,3,5-Trimethylbenzene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
75-01-4	Vinyl chloride	524.2	0.002 *	0.0002	< 0.0002	mg/L	---	06/28/17 19:44	3720812
95-47-6	1,2-Xylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
179601-23-1	1,3 + 1,4-Xylene	524.2	---	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812
1330-20-7	Xylenes, Total	524.2	10 *	0.0005	< 0.0005	mg/L	---	06/28/17 19:44	3720812

Compliance monitoring for 1,2-Dibromo-3-chloropropane (DBCP) must be done using EPA method 504.1.

Compliance monitoring for 1,2-Dibromoethane (EDB) must be done using EPA method 504.1.

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis. CCL, CCM, and CCH are the CCC standards at low, mid, and high concentration levels, respectively.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control. FBL, FBM, and FBH are the LFB samples at low, mid, and high concentration levels, respectively.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix. SDL, SDM, and SDH / LFSMDL, LFSMDM, and LFSMDH are the MSD or LFSMD at low, mid, and high concentration levels, respectively.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results. MSL, MSM, and MSH / LFSML, LFSMM, and LFSMH are the MS or LFSM at low, mid, and high concentration levels, respectively.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

Eurofins Eaton Analytical

Run Log

Run ID: 231253 Method: 524.2

<u>Type</u>	<u>Sample Id</u>	<u>Sample Site</u>	<u>Matrix</u>	<u>Instrument ID</u>	<u>Analysis Date</u>	<u>Calibration File</u>
CCC	3721656		RW	B	06/28/2017 13:22	524 2-062317B-SC.mth
CCL	3721660		RW	B	06/28/2017 14:02	524 2-062317B-SC.mth
CCL	3722240		RW	B	06/28/2017 14:46	524 2-062317B-SC.mth
LMB	3721659		RW	B	06/28/2017 15:30	524 2-062317B-SC.mth
LTB	3720812	SF22082-016 LTB	RW	B	06/28/2017 19:44	524 2-062317B-SC.mth
FS	3720810	SF22082-009 PW-4	DW	B	06/28/2017 20:18	524 2-062317B-SC.mth
FD	3722215	SF22082-009 PW-4	DW	B	06/28/2017 20:51	524 2-062317B-SC.mth
FS	3720811	SF22082-012 Boazman Well	DW	B	06/28/2017 21:24	524 2-062317B-SC.mth
MS	3722216	SF22082-012 Boazman Well	DW	B	06/28/2017 21:57	524 2-062317B-SC.mth
CCC	3724939		RW	B	06/28/2017 22:31	524 2-062317B-SC.mth

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
CCC	IS-1,4-Difluorobenzene	524.2	N/A	---		193256	193256	ug/L	100	50 - 150	---	1.0	---	06/28/2017 13:22	3721656
CCC	SS-Bromofluorobenzene	524.2	N/A	---		4.9620	5.0	ug/L	99	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	SS-1,2-Dichlorobenzene-d4	524.2	N/A	---		9.8410	10.0	ug/L	98	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	SS-1,2-Dichloroethane-d4	524.2	N/A	---		9.9730	10.0	ug/L	100	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	SS-Toluene-d8	524.2	N/A	---		10.1930	10.0	ug/L	102	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	Benzene	524.2	0.5	---		4.9630	5.0	ug/L	99	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	Bromobenzene	524.2	0.5	---		5.6980	5.0	ug/L	111	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	Bromochloromethane	524.2	0.5	---		5.0780	5.0	ug/L	102	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	Bromodichloromethane	524.2	0.5	---		5.0590	5.0	ug/L	101	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	Bromoforn	524.2	0.5	---		5.0030	5.0	ug/L	100	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	Bromomethane	524.2	0.5	---		4.3050	5.0	ug/L	86	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	n-Butylbenzene	524.2	0.5	---		5.2160	5.0	ug/L	104	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	sec-Butylbenzene	524.2	0.5	---		5.2690	5.0	ug/L	105	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	tert-Butylbenzene	524.2	0.5	---		5.2430	5.0	ug/L	105	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	Carbon tetrachloride	524.2	0.5	---		5.0650	5.0	ug/L	101	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	Chlorobenzene	524.2	0.5	---		5.1360	5.0	ug/L	103	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	Chloroethane	524.2	0.5	---		4.1850	5.0	ug/L	84	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	Chloroforn	524.2	0.5	---		4.8900	5.0	ug/L	98	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	Chloromethane	524.2	0.5	---		5.0950	5.0	ug/L	102	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	2-Chlorotoluene	524.2	0.5	---		5.3010	5.0	ug/L	106	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	4-Chlorotoluene	524.2	0.5	---		5.5160	5.0	ug/L	110	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	Dibromochloromethane	524.2	0.5	---		4.8990	5.0	ug/L	98	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,2-Dibromo-3-chloropropane (DBCP)	524.2	0.2	---		5.0870	5.0	ug/L	102	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,2-Dibromoethane (EDB)	524.2	0.2	---		5.0970	5.0	ug/L	102	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	Dibromomethane	524.2	0.5	---		5.1620	5.0	ug/L	103	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,2-Dichlorobenzene	524.2	0.5	---		5.2440	5.0	ug/L	105	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,3-Dichlorobenzene	524.2	0.5	---		5.5230	5.0	ug/L	110	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,4-Dichlorobenzene	524.2	0.5	---		5.3510	5.0	ug/L	107	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	Dichlorodifluoromethane	524.2	0.5	---		4.7210	5.0	ug/L	94	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,1-Dichloroethane	524.2	0.5	---		5.0050	5.0	ug/L	100	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,2-Dichloroethane	524.2	0.5	---		5.0660	5.0	ug/L	101	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,1-Dichloroethylene	524.2	0.5	---		4.4510	5.0	ug/L	89	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	dis-1,2-Dichloroethylene	524.2	0.5	---		5.0810	5.0	ug/L	102	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	trans-1,2-Dichloroethylene	524.2	0.5	---		4.9730	5.0	ug/L	99	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	Dichloromethane	524.2	0.5	---		5.2110	5.0	ug/L	104	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,2-Dichloropropane	524.2	0.5	---		5.0290	5.0	ug/L	101	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,3-Dichloropropane	524.2	0.5	---		5.1040	5.0	ug/L	102	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	2,2-Dichloropropane	524.2	0.5	---		5.6500	5.0	ug/L	113	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,1-Dichloropropylene	524.2	0.5	---		5.0410	5.0	ug/L	101	70 - 130	---	1.0	---	06/28/2017 13:22	3721656
CCC	cis-1,3-Dichloropropylene	524.2	0.5	---		5.1480	5.0	ug/L	103	70 - 130	---	1.0	---	06/28/2017 13:22	3721656

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
CCC	trans-1,3-Dichloropropylene	524.2	0.5	---		5.0250	5.0	ug/L	100	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	Ethylbenzene	524.2	0.5	---		5.0960	5.0	ug/L	102	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	Hexachlorobutadiene	524.2	0.5	---		4.8540	5.0	ug/L	97	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	Isopropylbenzene	524.2	0.5	---		5.1840	5.0	ug/L	104	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	4-Isopropyltoluene	524.2	0.5	---		5.3980	5.0	ug/L	108	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	Methyl-t-butyl ether (MTBE)	524.2	0.5	---		4.8410	5.0	ug/L	97	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	Naphthalene	524.2	0.5	---		4.9830	5.0	ug/L	100	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	n-Propylbenzene	524.2	0.5	---		5.3620	5.0	ug/L	107	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	Styrene	524.2	0.5	---		4.9730	5.0	ug/L	99	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,1,1,2-Tetrachloroethane	524.2	0.5	---		5.2830	5.0	ug/L	106	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,1,2,2-Tetrachloroethane	524.2	0.5	---		5.3840	5.0	ug/L	108	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	Tetrachloroethylene	524.2	0.5	---		5.1000	5.0	ug/L	102	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	Toluene	524.2	0.5	---		5.0420	5.0	ug/L	101	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,2,3-Trichlorobenzene	524.2	0.5	---		5.1500	5.0	ug/L	103	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,2,4-Trichlorobenzene	524.2	0.5	---		5.1680	5.0	ug/L	103	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,1,1-Trichloroethane	524.2	0.5	---		5.0710	5.0	ug/L	101	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,1,2-Trichloroethane	524.2	0.5	---		5.1800	5.0	ug/L	104	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	Trichloroethylene	524.2	0.5	---		5.0370	5.0	ug/L	101	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	Trichlorofluoromethane	524.2	0.5	---		4.9210	5.0	ug/L	98	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,2,3-Trichloropropane	524.2	0.5	---		5.0190	5.0	ug/L	100	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,2,4-Trimethylbenzene	524.2	0.5	---		5.2590	5.0	ug/L	105	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,3,5-Trimethylbenzene	524.2	0.5	---		5.1700	5.0	ug/L	103	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	Vinyl chloride	524.2	0.2	---		3.9870	5.0	ug/L	80	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,2-Xylene	524.2	0.5	---		5.1480	5.0	ug/L	103	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCC	1,3 + 1,4-Xylene	524.2	0.5	---		10.6310	10.0	ug/L	106	70 - 130	---	---	1.0	---	06/28/2017 13:22	3721656
CCL	IS-1,4-Difluorobenzene	524.2	N/A	---		197836	197836	ug/L	100	50 - 150	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	SS-Bromofluorobenzene	524.2	N/A	---		4.9710	5.0	ug/L	99	70 - 130	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	SS-1,2-Dichlorobenzene-d4	524.2	N/A	---		9.8870	10.0	ug/L	99	70 - 130	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	SS-1,2-Dichloroethane-d4	524.2	N/A	---		9.4460	10.0	ug/L	94	70 - 130	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	SS-Toluene-d8	524.2	N/A	---		9.8820	10.0	ug/L	99	70 - 130	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	Benzene	524.2	0.5	---		0.4340	0.5	ug/L	87	68 - 118	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	Bromodichloromethane	524.2	0.5	---		0.4410	0.5	ug/L	88	50 - 150	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	Bromoforn	524.2	0.5	---		0.4120	0.5	ug/L	82	50 - 150	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	Carbon tetrachloride	524.2	0.5	---		0.4900	0.5	ug/L	98	61 - 118	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	Chlorobenzene	524.2	0.5	---		0.4260	0.5	ug/L	85	66 - 122	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	Chloroforn	524.2	0.5	---		0.4800	0.5	ug/L	96	50 - 150	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	Dibromochloromethane	524.2	0.5	---		0.4520	0.5	ug/L	90	50 - 150	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	1,2-Dichlorobenzene	524.2	0.5	---		0.4810	0.5	ug/L	96	67 - 126	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	1,4-Dichlorobenzene	524.2	0.5	---		0.5940	0.5	ug/L	119	61 - 126	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	1,2-Dichloroethane	524.2	0.5	---		0.3670	0.5	ug/L	73	69 - 119	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	1,1-Dichloroethylene	524.2	0.5	---		0.3850	0.5	ug/L	77	62 - 121	---	---	1.0	---	06/28/2017 14:02	3721660

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
CCL	cis-1,2-Dichloroethylene	524.2	0.5	---		0.4190	0.5	ug/L	84	67 - 117	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	trans-1,2-Dichloroethylene	524.2	0.5	---		0.4190	0.5	ug/L	84	63 - 119	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	1,2-Dichloropropane	524.2	0.5	---		0.4900	0.5	ug/L	98	65 - 121	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	Ethylbenzene	524.2	0.5	---		0.4500	0.5	ug/L	90	63 - 119	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	Styrene	524.2	0.5	---		0.4280	0.5	ug/L	86	54 - 133	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	Tetrachloroethylene	524.2	0.5	---		0.4830	0.5	ug/L	97	59 - 124	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	Toluene	524.2	0.5	---		0.4250	0.5	ug/L	85	65 - 119	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	1,1,1-Trichloroethane	524.2	0.5	---		0.4750	0.5	ug/L	95	61 - 116	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	1,1,2-Trichloroethane	524.2	0.5	---		0.3830	0.5	ug/L	77	66 - 118	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	Trichloroethylene	524.2	0.5	---		0.4300	0.5	ug/L	86	64 - 119	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	Vinyl chloride	524.2	0.2	---		0.4450	0.5	ug/L	89	52 - 130	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	1,2-Xylene	524.2	0.5	---		0.4510	0.5	ug/L	90	67 - 119	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	1,3 + 1,4-Xylene	524.2	0.5	---		0.7700	1.0	ug/L	77	65 - 119	---	---	1.0	---	06/28/2017 14:02	3721660
CCL	IS-1,4-Difluorobenzene	524.2	N/A	---		186158	186158	ug/L	100	50 - 150	---	---	1.0	---	06/28/2017 14:46	3722240
CCL	SS-Bromofluorobenzene	524.2	N/A	---		5.2600	5.0	ug/L	105	70 - 130	---	---	1.0	---	06/28/2017 14:46	3722240
CCL	SS-1,2-Dichlorobenzene-d4	524.2	N/A	---		10.0350	10.0	ug/L	100	70 - 130	---	---	1.0	---	06/28/2017 14:46	3722240
CCL	SS-1,2-Dichloroethane-d4	524.2	N/A	---		9.9650	10.0	ug/L	100	70 - 130	---	---	1.0	---	06/28/2017 14:46	3722240
CCL	SS-Toluene-d8	524.2	N/A	---		10.4720	10.0	ug/L	105	70 - 130	---	---	1.0	---	06/28/2017 14:46	3722240
CCL	Dichloromethane	524.2	0.5	---		0.4850	0.5	ug/L	97	38 - 154	---	---	1.0	---	06/28/2017 14:46	3722240
CCL	1,2,4-Trichlorobenzene	524.2	0.5	---		0.6040	0.5	ug/L	121	57 - 150	---	---	1.0	---	06/28/2017 14:46	3722240
LMB	IS-1,4-Difluorobenzene	524.2	N/A	---		190112	186158	ug/L	102	70 - 130	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	SS-Bromofluorobenzene	524.2	N/A	---		4.8400	5.0	ug/L	97	70 - 130	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	SS-1,2-Dichlorobenzene-d4	524.2	N/A	---		9.6900	10.0	ug/L	97	70 - 130	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	SS-1,2-Dichloroethane-d4	524.2	N/A	---		10.0310	10.0	ug/L	100	70 - 130	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	SS-Toluene-d8	524.2	N/A	---		10.0590	10.0	ug/L	101	70 - 130	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Benzene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Bromobenzene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Bromochloromethane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Bromodichloromethane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Bromoform	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Bromomethane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	n-Butylbenzene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	sec-Butylbenzene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	tert-Butylbenzene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Carbon tetrachloride	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Chlorobenzene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Chloroethane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Chloroform	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Chloromethane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	2-Chlorotoluene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	4-Chlorotoluene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	DII Factor	Extracted	Analyzed	EEA ID #
LMB	Dibromochloromethane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,2-Dibromo-3-chloropropane (DBCP)	524.2	0.2	---	<	0.2		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,2-Dibromoethane (EDB)	524.2	0.2	---	<	0.2		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Dibromomethane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,2-Dichlorobenzene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,3-Dichlorobenzene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,4-Dichlorobenzene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Dichlorodifluoromethane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,1-Dichloroethane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,2-Dichloroethane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,1-Dichloroethylene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	cis-1,2-Dichloroethylene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	trans-1,2-Dichloroethylene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Dichloromethane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,2-Dichloropropane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,3-Dichloropropane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	2,2-Dichloropropane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,1-Dichloropropylene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	cis-1,3-Dichloropropylene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	trans-1,3-Dichloropropylene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Ethylbenzene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Hexachlorobutadiene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Isopropylbenzene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	4-Isopropyltoluene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Methyl-t-butyl ether (MTBE)	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Naphthalene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	n-Propylbenzene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Styrene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,1,1,2-Tetrachloroethane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,1,2,2-Tetrachloroethane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Tetrachloroethylene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Toluene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,2,3-Trichlorobenzene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,2,4-Trichlorobenzene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,1,1-Trichloroethane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,1,2-Trichloroethane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Trichloroethylene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	Trichlorofluoromethane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,2,3-Trichloropropane	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,2,4-Trimethylbenzene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,3,5-Trimethylbenzene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
LMB	Vinyl chloride	524.2	0.2	---	<	0.2		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,2-Xylene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LMB	1,3 + 1,4-Xylene	524.2	0.5	---	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 15:30	3721659
LTB	IS-1,4-Difluorobenzene	524.2	N/A	SF22082-016 LTB		186766	186158	ug/L	101	70 - 130	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	SS-Bromofluorobenzene	524.2	N/A	SF22082-016 LTB		5.0880	5.0	ug/L	102	70 - 130	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	SS-1,2-Dichlorobenzene-d4	524.2	N/A	SF22082-016 LTB		10.0150	10.0	ug/L	100	70 - 130	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	SS-1,2-Dichloroethane-d4	524.2	N/A	SF22082-016 LTB		9.9040	10.0	ug/L	99	70 - 130	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	SS-Toluene-d8	524.2	N/A	SF22082-016 LTB		9.8090	10.0	ug/L	98	70 - 130	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Benzene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Bromobenzene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Bromochloromethane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Bromodichloromethane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Bromoform	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Bromomethane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	n-Butylbenzene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	sec-Butylbenzene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	tert-Butylbenzene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Carbon tetrachloride	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Chlorobenzene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Chloroethane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Chloroform	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Chloromethane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	2-Chlorotoluene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	4-Chlorotoluene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Dibromochloromethane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,2-Dibromo-3-chloropropane (DBCP)	524.2	0.2	SF22082-016 LTB	<	0.2		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,2-Dibromoethane (EDB)	524.2	0.2	SF22082-016 LTB	<	0.2		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Dibromomethane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,2-Dichlorobenzene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,3-Dichlorobenzene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,4-Dichlorobenzene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Total Dichlorobenzene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Dichlorodifluoromethane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,1-Dichloroethane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,2-Dichloroethane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,1-Dichloroethylene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	cis-1,2-Dichloroethylene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	trans-1,2-Dichloroethylene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Dichloromethane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,2-Dichloropropane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,3-Dichloropropane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	DII Factor	Extracted	Analyzed	EEA ID #
LTB	2,2-Dichloropropane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,1-Dichloropropylene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,3-Dichloropropylene, cis & trans	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	cis-1,3-Dichloropropylene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	trans-1,3-Dichloropropylene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Ethylbenzene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Hexachlorobutadiene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Isopropylbenzene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	4-Isopropyltoluene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Methyl-t-butyl ether (MTBE)	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Naphthalene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	n-Propylbenzene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Styrene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,1,1,2-Tetrachloroethane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,1,2,2-Tetrachloroethane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Tetrachloroethylene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Toluene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Total Trihalomethanes	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,2,3-Trichlorobenzene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,2,4-Trichlorobenzene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,1,1-Trichloroethane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,1,2-Trichloroethane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Trichloroethylene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Trichlorofluoromethane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,2,3-Trichloropropane	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,2,4-Trimethylbenzene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,3,5-Trimethylbenzene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Vinyl chloride	524.2	0.2	SF22082-016 LTB	<	0.2		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,2-Xylene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	1,3 + 1,4-Xylene	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
LTB	Xylenes, Total	524.2	0.5	SF22082-016 LTB	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 19:44	3720812
FS	IS-1,4-Difluorobenzene	524.2	N/A	SF22082-009 PW-4		191017	186158	ug/L	103	70 - 130	---	---	1.0	---	06/28/2017 20:18	3720810
FS	SS-Bromofluorobenzene	524.2	N/A	SF22082-009 PW-4		4.9210	5.0	ug/L	98	70 - 130	---	---	1.0	---	06/28/2017 20:18	3720810
FS	SS-1,2-Dichlorobenzene-d4	524.2	N/A	SF22082-009 PW-4		10.0120	10.0	ug/L	100	70 - 130	---	---	1.0	---	06/28/2017 20:18	3720810
FS	SS-1,2-Dichloroethane-d4	524.2	N/A	SF22082-009 PW-4		9.7670	10.0	ug/L	98	70 - 130	---	---	1.0	---	06/28/2017 20:18	3720810
FS	SS-Toluene-d8	524.2	N/A	SF22082-009 PW-4		9.8930	10.0	ug/L	99	70 - 130	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Benzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Bromobenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Bromochloromethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Bromodichloromethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Bromoform	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	Bromomethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	n-Butylbenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	sec-Butylbenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	tert-Butylbenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Carbon tetrachloride	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Chlorobenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Chloroethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Chloroform	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Chloromethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	2-Chlorotoluene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	4-Chlorotoluene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Dibromochloromethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,2-Dibromo-3-chloropropane (DBCP)	524.2	0.2	SF22082-009 PW-4	<	0.2		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,2-Dibromoethane (EDB)	524.2	0.2	SF22082-009 PW-4	<	0.2		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Dibromomethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,2-Dichlorobenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,3-Dichlorobenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,4-Dichlorobenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Total Dichlorobenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Dichlorodifluoromethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,1-Dichloroethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,2-Dichloroethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,1-Dichloroethylene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	cis-1,2-Dichloroethylene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	trans-1,2-Dichloroethylene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Dichloromethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,2-Dichloropropane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,3-Dichloropropane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	2,2-Dichloropropane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,1-Dichloropropylene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,3-Dichloropropylene, cis & trans	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	cis-1,3-Dichloropropylene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	trans-1,3-Dichloropropylene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Ethylbenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Hexachlorobutadiene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Isopropylbenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	4-Isopropyltoluene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Methyl-t-butyl ether (MTBE)	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Naphthalene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	n-Propylbenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Styrene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	1,1,2-Tetrachloroethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,1,2-Tetrachloroethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Tetrachloroethylene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Toluene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Total Trihalomethanes	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,2,3-Trichlorobenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,2,4-Trichlorobenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,1,1-Trichloroethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,1,2-Trichloroethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Trichloroethylene	524.2	0.5	SF22082-009 PW-4	<	0.9		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Trichlorofluoromethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,2,3-Trichloropropane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,2,4-Trimethylbenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,3,5-Trimethylbenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Vinyl chloride	524.2	0.2	SF22082-009 PW-4	<	0.2		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,2-Xylene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	1,3 + 1,4-Xylene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FS	Xylenes, Total	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:18	3720810
FD	IS-1,4-Difluorobenzene	524.2	N/A	SF22082-009 PW-4		191225	186158	ug/L	103	70 - 130	---	---	1.0	---	06/28/2017 20:51	3722215
FD	SS-Bromofluorobenzene	524.2	N/A	SF22082-009 PW-4		4.9790	5.0	ug/L	100	70 - 130	---	---	1.0	---	06/28/2017 20:51	3722215
FD	SS-1,2-Dichlorobenzene-d4	524.2	N/A	SF22082-009 PW-4		10.3060	10.0	ug/L	103	70 - 130	---	---	1.0	---	06/28/2017 20:51	3722215
FD	SS-1,2-Dichloroethane-d4	524.2	N/A	SF22082-009 PW-4		9.9940	10.0	ug/L	100	70 - 130	---	---	1.0	---	06/28/2017 20:51	3722215
FD	SS-Toluene-d8	524.2	N/A	SF22082-009 PW-4		10.0810	10.0	ug/L	101	70 - 130	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Benzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Bromobenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Bromochloromethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Bromodichloromethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Bromoforn	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Bromomethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	n-Butylbenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	sec-Butylbenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	tert-Butylbenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Carbon tetrachloride	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Chlorobenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Chloroethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Chloroform	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Chloromethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	2-Chlorotoluene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	4-Chlorotoluene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Dibromochloromethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,2-Dibromo-3-chloropropane (DBCP)	524.2	0.2	SF22082-009 PW-4	<	0.2		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	DII Factor	Extracted	Analyzed	EEA ID #
FD	1,2-Dibromoethane (EDB)	524.2	0.2	SF22082-009 PW-4	<	0.2		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Dibromomethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,2-Dichlorobenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,3-Dichlorobenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,4-Dichlorobenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Dichlorodifluoromethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,1-Dichloroethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,2-Dichloroethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,1-Dichloroethylene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	cis-1,2-Dichloroethylene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	trans-1,2-Dichloroethylene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Dichloromethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,2-Dichloropropane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,3-Dichloropropane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	2,2-Dichloropropane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,1-Dichloropropylene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	cis-1,3-Dichloropropylene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	trans-1,3-Dichloropropylene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Ethylbenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Hexachlorobutadiene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Isopropylbenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	4-Isopropyltoluene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Methyl-t-butyl ether (MTBE)	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Naphthalene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	n-Propylbenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Styrene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,1,1,2-Tetrachloroethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,1,2,2-Tetrachloroethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Tetrachloroethylene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,2,3-Trichlorobenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,2,4-Trichlorobenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,1,1-Trichloroethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,1,2-Trichloroethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Trichloroethylene	524.2	0.5	SF22082-009 PW-4	<	0.9		ug/L	---	---	1.1	16	1.0	---	06/28/2017 20:51	3722215
FD	Trichlorofluoromethane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,2,3-Trichloropropane	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,2,4-Trimethylbenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,3,5-Trimethylbenzene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	Vinyl chloride	524.2	0.2	SF22082-009 PW-4	<	0.2		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FD	1,2-Xylene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FD	1,3 + 1,4-Xylene	524.2	0.5	SF22082-009 PW-4	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 20:51	3722215
FS	IS-1,4-Difluorobenzene	524.2	N/A	SF22082-012 Boazman Well	<	189594	186158	ug/L	102	70 - 130	---	---	1.0	---	06/28/2017 21:24	3720811
FS	SS-Bromofluorobenzene	524.2	N/A	SF22082-012 Boazman Well	<	4.8390	5.0	ug/L	97	70 - 130	---	---	1.0	---	06/28/2017 21:24	3720811
FS	SS-1,2-Dichlorobenzene-d4	524.2	N/A	SF22082-012 Boazman Well	<	10.2600	10.0	ug/L	103	70 - 130	---	---	1.0	---	06/28/2017 21:24	3720811
FS	SS-1,2-Dichloroethane-d4	524.2	N/A	SF22082-012 Boazman Well	<	9.8150	10.0	ug/L	98	70 - 130	---	---	1.0	---	06/28/2017 21:24	3720811
FS	SS-Toluene-d8	524.2	N/A	SF22082-012 Boazman Well	<	9.9580	10.0	ug/L	100	70 - 130	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Benzene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Bromobenzene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Bromochloromethane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Bromodichloromethane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Bromofrom	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Bromomethane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	n-Butylbenzene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	sec-Butylbenzene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	tert-Butylbenzene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Carbon tetrachloride	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Chlorobenzene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Chloroethane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Chloroform	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Chloromethane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	2-Chlorotoluene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	4-Chlorotoluene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Dibromochloromethane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,2-Dibromo-3-chloropropane (DBCP)	524.2	0.2	SF22082-012 Boazman Well	<	0.2		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,2-Dibromoethane (EDB)	524.2	0.2	SF22082-012 Boazman Well	<	0.2		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Dibromomethane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,2-Dichlorobenzene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,3-Dichlorobenzene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,4-Dichlorobenzene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Total Dichlorobenzene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Dichlorodifluoromethane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,1-Dichloroethane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,2-Dichloroethane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,1-Dichloroethylene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	dis-1,2-Dichloroethylene	524.2	0.5	SF22082-012 Boazman Well	<	1.9		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	trans-1,2-Dichloroethylene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Dichloromethane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,2-Dichloropropane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,3-Dichloropropane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	2,2-Dichloropropane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,1-Dichloropropylene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	1,3-Dichloropropylene, cis & trans	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	cis-1,3-Dichloropropylene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	trans-1,3-Dichloropropylene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Ethylbenzene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Hexachlorobutadiene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Isopropylbenzene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	4-Isopropyltoluene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Methyl-t-butyl ether (MTBE)	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Naphthalene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	n-Propylbenzene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Styrene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,1,1,2-Tetrachloroethane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,1,2,2-Tetrachloroethane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Tetrachloroethylene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Toluene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Total Trihalomethanes	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,2,3-Trichlorobenzene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,2,4-Trichlorobenzene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,1,1-Trichloroethane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,1,2-Trichloroethane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Trichloroethylene	524.2	0.5	SF22082-012 Boazman Well	<	1.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Trichlorofluoromethane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,2,3-Trichloropropane	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,2,4-Trimethylbenzene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,3,5-Trimethylbenzene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Vinyl chloride	524.2	0.2	SF22082-012 Boazman Well	<	0.2		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,2-Xylene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	1,3 + 1,4-Xylene	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
FS	Xylenes, Total	524.2	0.5	SF22082-012 Boazman Well	<	0.5		ug/L	---	---	---	---	1.0	---	06/28/2017 21:24	3720811
MS	IS-1,4-Difluorobenzene	524.2	N/A	SF22082-012 Boazman Well		193266	186158	ug/L	104	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	SS-Bromofluorobenzene	524.2	N/A	SF22082-012 Boazman Well		4.9910	5.0	ug/L	100	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	SS-1,2-Dichlorobenzene-d4	524.2	N/A	SF22082-012 Boazman Well		10.3630	10.0	ug/L	104	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	SS-1,2-Dichloroethane-d4	524.2	N/A	SF22082-012 Boazman Well		9.7720	10.0	ug/L	98	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	SS-Toluene-d8	524.2	N/A	SF22082-012 Boazman Well		10.1460	10.0	ug/L	101	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Benzene	524.2	0.5	SF22082-012 Boazman Well		4.6400	5.0	ug/L	93	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Bromobenzene	524.2	0.5	SF22082-012 Boazman Well		4.8610	5.0	ug/L	97	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Bromochloromethane	524.2	0.5	SF22082-012 Boazman Well		4.5730	5.0	ug/L	91	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Bromodichloromethane	524.2	0.5	SF22082-012 Boazman Well		4.7050	5.0	ug/L	94	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Bromoform	524.2	0.5	SF22082-012 Boazman Well		4.4570	5.0	ug/L	89	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Bromomethane	524.2	0.5	SF22082-012 Boazman Well		3.8680	5.0	ug/L	77	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	n-Butylbenzene	524.2	0.5	SF22082-012 Boazman Well		4.9580	5.0	ug/L	99	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	DII Factor	Extracted	Analyzed	EEA ID #
MS	sec-Butylbenzene	524.2	0.5	SF22082-012 Boazman Well		5.1060	5.0	ug/L	102	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	tert-Butylbenzene	524.2	0.5	SF22082-012 Boazman Well		5.1340	5.0	ug/L	103	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Carbon tetrachloride	524.2	0.5	SF22082-012 Boazman Well		4.7680	5.0	ug/L	95	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Chlorobenzene	524.2	0.5	SF22082-012 Boazman Well		4.6960	5.0	ug/L	94	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Chloroethane	524.2	0.5	SF22082-012 Boazman Well		3.8010	5.0	ug/L	76	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Chloroform	524.2	0.5	SF22082-012 Boazman Well		4.6150	5.0	ug/L	92	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Chloromethane	524.2	0.5	SF22082-012 Boazman Well		4.0850	5.0	ug/L	82	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	2-Chlorotoluene	524.2	0.5	SF22082-012 Boazman Well		5.0730	5.0	ug/L	101	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	4-Chlorotoluene	524.2	0.5	SF22082-012 Boazman Well		4.7980	5.0	ug/L	96	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Dibromochloromethane	524.2	0.5	SF22082-012 Boazman Well		4.4000	5.0	ug/L	88	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,2-Dibromo-3-chloropropane (DBCP)	524.2	0.2	SF22082-012 Boazman Well		4.3620	5.0	ug/L	87	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,2-Dibromoethane (EDB)	524.2	0.2	SF22082-012 Boazman Well		4.3330	5.0	ug/L	87	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Dibromomethane	524.2	0.5	SF22082-012 Boazman Well		4.4420	5.0	ug/L	89	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,2-Dichlorobenzene	524.2	0.5	SF22082-012 Boazman Well		4.7610	5.0	ug/L	95	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,3-Dichlorobenzene	524.2	0.5	SF22082-012 Boazman Well		4.9450	5.0	ug/L	99	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,4-Dichlorobenzene	524.2	0.5	SF22082-012 Boazman Well		4.8270	5.0	ug/L	97	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Dichlorodifluoromethane	524.2	0.5	SF22082-012 Boazman Well		4.5340	5.0	ug/L	91	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,1-Dichloroethane	524.2	0.5	SF22082-012 Boazman Well		5.5160	5.866	ug/L	93	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,2-Dichloroethane	524.2	0.5	SF22082-012 Boazman Well		4.7620	5.0	ug/L	95	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,1-Dichloroethylene	524.2	0.5	SF22082-012 Boazman Well		4.3040	5.0	ug/L	86	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	dis-1,2-Dichloroethylene	524.2	0.5	SF22082-012 Boazman Well		6.4920	6.863	ug/L	93	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	trans-1,2-Dichloroethylene	524.2	0.5	SF22082-012 Boazman Well		4.6720	5.0	ug/L	93	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Dichloromethane	524.2	0.5	SF22082-012 Boazman Well		3.3950	5.0	ug/L	68	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,2-Dichloropropane	524.2	0.5	SF22082-012 Boazman Well		4.6330	5.0	ug/L	93	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,3-Dichloropropane	524.2	0.5	SF22082-012 Boazman Well		4.7300	5.0	ug/L	95	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	2,2-Dichloropropane	524.2	0.5	SF22082-012 Boazman Well		4.8720	5.0	ug/L	97	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,1-Dichloropropylene	524.2	0.5	SF22082-012 Boazman Well		4.8900	5.0	ug/L	98	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	cis-1,3-Dichloropropylene	524.2	0.5	SF22082-012 Boazman Well		4.7220	5.0	ug/L	94	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	trans-1,3-Dichloropropylene	524.2	0.5	SF22082-012 Boazman Well		4.6380	5.0	ug/L	93	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Ethylbenzene	524.2	0.5	SF22082-012 Boazman Well		4.8280	5.0	ug/L	97	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Hexachlorobutadiene	524.2	0.5	SF22082-012 Boazman Well		4.6420	5.0	ug/L	93	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Isopropylbenzene	524.2	0.5	SF22082-012 Boazman Well		4.9880	5.0	ug/L	100	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	4-Isopropyltoluene	524.2	0.5	SF22082-012 Boazman Well		5.0670	5.0	ug/L	101	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Methyl-t-butyl ether (MTBE)	524.2	0.5	SF22082-012 Boazman Well		4.3590	5.0	ug/L	87	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Naphthalene	524.2	0.5	SF22082-012 Boazman Well		4.2680	5.0	ug/L	85	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	n-Propylbenzene	524.2	0.5	SF22082-012 Boazman Well		5.1000	5.0	ug/L	102	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Styrene	524.2	0.5	SF22082-012 Boazman Well		3.5860	5.0	ug/L	72	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,1,1,2-Tetrachloroethane	524.2	0.5	SF22082-012 Boazman Well		4.6790	5.0	ug/L	94	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,1,2,2-Tetrachloroethane	524.2	0.5	SF22082-012 Boazman Well		4.5630	5.0	ug/L	91	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Tetrachloroethylene	524.2	0.5	SF22082-012 Boazman Well		4.6190	5.0	ug/L	92	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Toluene	524.2	0.5	SF22082-012 Boazman Well		4.6780	5.0	ug/L	94	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
MS	1,2,3-Trichlorobenzene	524.2	0.5	SF22082-012 Boazman Well		4.2830	5.0	ug/L	86	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,2,4-Trichlorobenzene	524.2	0.5	SF22082-012 Boazman Well		4.7140	5.0	ug/L	94	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,1,1-Trichloroethane	524.2	0.5	SF22082-012 Boazman Well		4.8220	5.0	ug/L	96	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,1,2-Trichloroethane	524.2	0.5	SF22082-012 Boazman Well		4.6940	5.0	ug/L	94	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Trichloroethylene	524.2	0.5	SF22082-012 Boazman Well		6.2780	6.462	ug/L	96	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Trichlorofluoromethane	524.2	0.5	SF22082-012 Boazman Well		4.4870	5.0	ug/L	90	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,2,3-Trichloropropane	524.2	0.5	SF22082-012 Boazman Well		4.4130	5.0	ug/L	88	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,2,4-Trimethylbenzene	524.2	0.5	SF22082-012 Boazman Well		4.7090	5.0	ug/L	94	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,3,5-Trimethylbenzene	524.2	0.5	SF22082-012 Boazman Well		4.7090	5.0	ug/L	94	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	Vinyl chloride	524.2	0.2	SF22082-012 Boazman Well		3.6500	5.0	ug/L	73	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,2-Xylene	524.2	0.5	SF22082-012 Boazman Well		4.7320	5.0	ug/L	95	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
MS	1,3 + 1,4-Xylene	524.2	0.5	SF22082-012 Boazman Well		9.5470	10.0	ug/L	95	70 - 130	---	---	1.0	---	06/28/2017 21:57	3722216
CCC	IS-1,4-Difluorobenzene	524.2	N/A	---		191159	191159	ug/L	100	50 - 150	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	SS-Bromofluorobenzene	524.2	N/A	---		5.2290	5.0	ug/L	105	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	SS-1,2-Dichlorobenzene-d4	524.2	N/A	---		10.7860	10.0	ug/L	108	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	SS-1,2-Dichloroethane-d4	524.2	N/A	---		9.6960	10.0	ug/L	97	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	SS-Toluene-d8	524.2	N/A	---		10.0370	10.0	ug/L	100	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Benzene	524.2	0.5	---		7.6900	7.5	ug/L	103	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Bromobenzene	524.2	0.5	---		8.1510	7.5	ug/L	109	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Bromochloromethane	524.2	0.5	---		7.4620	7.5	ug/L	99	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Bromodichloromethane	524.2	0.5	---		7.8960	7.5	ug/L	105	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Bromoform	524.2	0.5	---		7.7960	7.5	ug/L	104	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Bromomethane	524.2	0.5	---		6.6660	7.5	ug/L	89	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	n-Butylbenzene	524.2	0.5	---		8.3980	7.5	ug/L	112	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	sec-Butylbenzene	524.2	0.5	---		8.2510	7.5	ug/L	110	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	tert-Butylbenzene	524.2	0.5	---		8.2010	7.5	ug/L	109	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Carbon tetrachloride	524.2	0.5	---		7.5490	7.5	ug/L	101	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Chlorobenzene	524.2	0.5	---		7.9070	7.5	ug/L	105	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Chloroethane	524.2	0.5	---		7.1660	7.5	ug/L	96	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Chloroform	524.2	0.5	---		7.8390	7.5	ug/L	105	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Chloromethane	524.2	0.5	---		7.5560	7.5	ug/L	101	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	2-Chlorotoluene	524.2	0.5	---		8.3110	7.5	ug/L	111	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	4-Chlorotoluene	524.2	0.5	---		8.3570	7.5	ug/L	111	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Dibromochloromethane	524.2	0.5	---		7.5190	7.5	ug/L	100	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,2-Dibromo-3-chloropropane (DBCP)	524.2	0.2	---		7.4840	7.5	ug/L	100	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,2-Dibromoethane (EDB)	524.2	0.2	---		7.7580	7.5	ug/L	103	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Dibromomethane	524.2	0.5	---		7.4280	7.5	ug/L	99	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,2-Dichlorobenzene	524.2	0.5	---		8.1660	7.5	ug/L	109	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,3-Dichlorobenzene	524.2	0.5	---		8.1600	7.5	ug/L	109	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,4-Dichlorobenzene	524.2	0.5	---		7.9100	7.5	ug/L	105	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Dichlorodifluoromethane	524.2	0.5	---		7.1360	7.5	ug/L	95	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
CCC	1,1-Dichloroethane	524.2	0.5	---		7.7750	7.5	ug/L	104	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,2-Dichloroethane	524.2	0.5	---		7.8530	7.5	ug/L	105	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,1-Dichloroethylene	524.2	0.5	---		6.9290	7.5	ug/L	92	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	cis-1,2-Dichloroethylene	524.2	0.5	---		7.7120	7.5	ug/L	103	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	trans-1,2-Dichloroethylene	524.2	0.5	---		7.5010	7.5	ug/L	100	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Dichloromethane	524.2	0.5	---		6.4770	7.5	ug/L	86	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,2-Dichloropropane	524.2	0.5	---		7.7590	7.5	ug/L	103	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,3-Dichloropropane	524.2	0.5	---		7.5890	7.5	ug/L	101	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	2,2-Dichloropropane	524.2	0.5	---		7.9350	7.5	ug/L	106	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,1-Dichloropropylene	524.2	0.5	---		7.4500	7.5	ug/L	99	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	cis-1,3-Dichloropropylene	524.2	0.5	---		7.6670	7.5	ug/L	102	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	trans-1,3-Dichloropropylene	524.2	0.5	---		8.1610	7.5	ug/L	109	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Ethylbenzene	524.2	0.5	---		7.8260	7.5	ug/L	104	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Hexachlorobutadiene	524.2	0.5	---		8.1380	7.5	ug/L	109	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Isopropylbenzene	524.2	0.5	---		8.2850	7.5	ug/L	110	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	4-Isopropyltoluene	524.2	0.5	---		8.5550	7.5	ug/L	114	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Methyl-t-butyl ether (MTBE)	524.2	0.5	---		7.6970	7.5	ug/L	103	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Naphthalene	524.2	0.5	---		7.6540	7.5	ug/L	102	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	n-Propylbenzene	524.2	0.5	---		8.3460	7.5	ug/L	111	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Styrene	524.2	0.5	---		8.4320	7.5	ug/L	112	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,1,1,2-Tetrachloroethane	524.2	0.5	---		7.7660	7.5	ug/L	104	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,1,2,2-Tetrachloroethane	524.2	0.5	---		8.5300	7.5	ug/L	114	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Tetrachloroethylene	524.2	0.5	---		7.5870	7.5	ug/L	101	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Toluene	524.2	0.5	---		7.7590	7.5	ug/L	103	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,2,3-Trichlorobenzene	524.2	0.5	---		7.8210	7.5	ug/L	104	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,2,4-Trichlorobenzene	524.2	0.5	---		7.7320	7.5	ug/L	103	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,1,1-Trichloroethane	524.2	0.5	---		7.8200	7.5	ug/L	104	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,1,2-Trichloroethane	524.2	0.5	---		8.0210	7.5	ug/L	107	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Trichloroethylene	524.2	0.5	---		7.7540	7.5	ug/L	103	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Trichlorofluoromethane	524.2	0.5	---		6.9450	7.5	ug/L	93	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,2,3-Trichloropropane	524.2	0.5	---		8.3510	7.5	ug/L	111	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,2,4-Trimethylbenzene	524.2	0.5	---		7.9350	7.5	ug/L	106	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,3,5-Trimethylbenzene	524.2	0.5	---		8.1890	7.5	ug/L	109	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	Vinyl chloride	524.2	0.2	---		6.1200	7.5	ug/L	82	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,2-Xylene	524.2	0.5	---		7.8400	7.5	ug/L	105	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939
CCC	1,3 + 1,4-Xylene	524.2	0.5	---		16.0220	15.0	ug/L	107	70 - 130	---	---	1.0	---	06/28/2017 22:31	3724939

Sample Type Key

<u>Type (Abbr.)</u>	<u>Sample Type</u>	<u>Type (Abbr.)</u>	<u>Sample Type</u>
CCC	Continuing Calibration Check		
CCL	Continuing Calibration Low		
FD	Field Duplicate		
FS	Field Sample		
LMB	Laboratory Method Blank		
LTB	Laboratory Trip Blank		
MS	Matrix Spike		

END OF REPORT

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package 391504 were collected on June 21-22, 2017 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 524.2

Results of the validation process indicate the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package SF06080 were collected on June 6, 2017 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package SF12045 were collected on June 12, 2017 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package SF12046 were collected on June 12, 2017 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Detections of acetone in primary samples were qualified “/B/T” due to the presence of the analyte in the associated trip blank sample.

Results of acetone associated with preparatory batch 44224 were qualified “/J/E” due to the relative percent difference between the laboratory control sample and laboratory control sample duplicate exceeding the established criteria of 25% (31%). These qualifiers indicate imprecision with laboratory methodology, instrumentation, or matrix interference.

Data Summary and Usability

The QC excursions encountered during the validation of this data set did not result in the rejection of any data. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package SF13096 were collected on June 13, 2017 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package SF14078 were collected on July 14, 2017 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Detections of acetone were qualified “/B/T” due to the presence of the analyte in the associated trip blank.

Data Summary and Usability

The QC excursions encountered during the validation of this data set did not result in the rejection of any data. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package SF20036 were collected on July 19-20, 2017 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Detections of carbon disulfide associated with preparatory batch 44933 and less than 3.05 µg/L were qualified “/B/K” due to the presence of the analyte in the associated method blank.

Metals by Method 6010D

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Ferric and Ferrous Iron by Method SM3500/601 and SM3500-Fe

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Chloride and Sulfate by Method 300.0

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Sulfide by Method SM4500-S2

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Alkalinity by Method SM2320B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

The QC excursions encountered during the validation of this data set did not result in the rejection of any data. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.

Site Name: Shakespeare Composite Structures
Laboratory Batch Number: SF20036
Collection Date: July 19-20, 2017

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package SF22082 were collected on June 20-22, 2017 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Detections of acetone and carbon disulfide in primary samples were qualified “/B/T” due to the presence of the analytes in the associated trip blank sample.

Results of carbon disulfide associated with preparatory batch 45134 and less than 2.85 µg/L were qualified “/B/K” due to the presence of the analyte in the associated method blank sample.

Data Summary and Usability

The QC excursions encountered during the validation of this data set did not result in the rejection of any data. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package SF23023 were collected on June 23, 2017 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package SF26019 were collected on June 26, 2017 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package SF27032 were collected on June 27, 2017 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash “/” and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package SF29048 were collected on June 29, 2017 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (USEPA, August 2014) and *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package SG05094 were collected on July 5, 2017 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

RCRA Metals by Methods 6010C/7470B/7471B

Results of the validation process indicate that the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

- United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Inorganic Superfund Data Review*. Publication #USEPA540/R-013-001.
- United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.
- United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package SG06069 were collected on July 6, 2017 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of the validation process indicate the data analyzed for this method are acceptable for their intended use and no data flags are required.

Data Summary and Usability

No QC excursions were encountered during the validation of this data set. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
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compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package SG11048 were collected on July 11, 2017 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Results of carbon disulfide associated with preparatory batch 46436 and less than 3 µg/L were qualified “/B/K” due to the presence of the analyte in the associated method blank sample.

Data Summary and Usability

The QC excursions encountered during the validation of this data set did not result in the rejection of any data. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.

DATA ASSESSMENT REPORT

Data assessment is a systematic process for reviewing a body of data against a predefined set of criteria to provide assurance that the data meet project Data Quality Objective (DQO) requirements. The purpose of the data assessment process is to determine if and how the usability of the analytical data is affected by the overall analytical processes and sample collection and handling procedures. If specific DQOs are not met, the data are qualified (i.e., data flags are assigned to sample results) in accordance with guidelines established by the United States Environmental Protection Agency (USEPA). Data assessment allows the data user to adequately determine if the data can be used for its intended purpose. The data acceptance criteria are established according to Standard Operating Procedures (SOPs) and Statements of Work (SOWs) provided to the contracted analytical laboratory. The assessment of data quality and usability involves five components, as described below.

- 1) **Field Sampling Check** is a process to ensure that all samples were collected and the laboratory analyses were performed as stipulated in the applicable site-specific Work Plan or Field Sampling Plan (FSP). Inspection of sample preservation procedures, sample handling, analysis requested, sample description and identification (ID), cooler receipt forms, holding time evaluation, and Chain of Custody procedures are all evaluated to ensure that the evidentiary nature of the samples and the resulting analytical data have not been compromised.
- 2) **Data Verification** is a process for determining the completeness, correctness, consistency, and compliance of a data package in accordance with requirements contained in the applicable SOW and/or contract-specific requirements. This is a review of the data package, electronic data deliverable (EDD), and invoice received from the contract laboratory to ensure that the contract required information is present and complete prior to data validation.
- 3) **Data Review** is a process of reviewing the primary quality control (QC) data provided by the laboratory and the results of any internal quality assurance (QA)/QC samples, such as field blanks, trip blanks, equipment blanks or ambient blanks, field split samples, and duplicate samples, to ascertain any effect the laboratory's procedures or the sample collection process has on the data.
- 4) **Data Evaluation** is a process to determine if the data meet project-specific DQOs and contract requirements. This evaluation may involve a review of field sampling and sample management procedures, laboratory audits, Performance Evaluation (PE) sample results, and any other data quality indicators that are available.
- 5) **Data Validation** is a process to determine the accuracy and precision of analytical data generated and to identify any anomalies encountered. The validation process is performed in accordance with USEPA regional or national functional guidelines, project-specific guidelines, and

compliance with the requirements of each analytical method. Two major components of data validation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance for each analytical method to determine if the samples were analyzed within the prescribed acceptance criteria of the method. Evaluation of matrix interferences involves the analysis of surrogate spike recoveries, matrix spike recoveries, and duplicate sample results. Data not meeting project-specific DQOs or the requirements of the analytical method are qualified with data flags according to referenced guidelines.

Data Assessment Procedures

AECOM performed independent QC checks of field and laboratory procedures that were used in collecting and analyzing the data. The QC checks verify that the data collected are of appropriate quality for the intended data use and that the DQOs were met. The steps and guidelines followed during the data validation process were modeled on the *USEPA National Functional Guidelines for Superfund Organic Data Review* (USEPA, August 2014). In addition, method-specific criteria set forth in the compendium of analytical methods found in the *Test Methods for Evaluation Solid Waste (SW-846), Update IV* (USEPA, February 2007) are also evaluated during the validation process. This validation process has been adapted to meet the DQO requirements for generation of definitive critical data.

Data Validation Results

The analytical data associated with analytical data package SF16059 were collected on July 15-16, 2017 for Shakespeare Composite Structures located in Newberry, South Carolina. The analytical data were validated according to the procedures outlined above. Where data flags have been applied to this data set, they are separated by a slash "/" and presented in the following format:

Laboratory Flag / Result Flags / Analysis Flags

- **Laboratory Flag:** This flag precedes the first slash and is added by the laboratory as a result of QC excursions from the analytical method. These flags are laboratory-specific and are described in the associated laboratory report.
- **Result Flags:** These are presented after the first slash and are added by AECOM based on data validation procedures and guidelines. They tell how and if the data should be used.
- **Analysis Flags:** These flags are presented after the second slash and are added by AECOM to inform the data user of any specific QA/QC problems that were encountered.

Any data requiring qualification as a result of the validation process were assigned data flags, as discussed below. The validation flags indicate how any QC excursions may have impacted the usability of the data.

Volatile Organic Compounds by Method 8260B

Detections of carbon disulfide associated with preparatory batch 44933 and less than 3.05 µg/L were qualified “/B/K” due to the presence of the analyte in the associated method blank.

Detections of carbon disulfide and acetone were qualified “/B/T” due to the presence of the analytes in the associated trip blank.

Data Summary and Usability

The QC excursions encountered during the validation of this data set did not result in the rejection of any data. Therefore, the data associated with this laboratory batch should be considered compliant and adequate for its intended use.

References

United States Environmental Protection Agency (USEPA), August 2014. *USEPA National Functional Guidelines for Superfund Organic Data Review*. Publication #EPA540-R-014-002.

United States Environmental Protection Agency (USEPA), February 2007. *Test Methods for Evaluating Solid Waste (SW-846)*, Update IV.