



1941 Reymet Road • Richmond, Virginia 23237 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 22C1510

Client Name:	Draper Aden Associates-Blacksburg	Date Received:	March 30, 2022 10:20
	2200 South Main Street Suite A	Date Issued:	April 6, 2022 17:18
	Blacksburg, VA 24060	Project Number:	[none]
Submitted To:	Janet Frazier	Purchase Order:	
Client Site I.D.:	Bristol Landfill		

Enclosed are the results of analyses for samples received by the laboratory on 03/30/2022 10:20. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

A handwritten signature in black ink that reads 'Ted Soyars'.

Ted Soyars
Technical Director

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

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Blacksburg, VA 24060 Project Number: [none]
Submitted To: Janet Frazier Purchase Order:

Client Site I.D.: Bristol Landfill

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
March 24-HR	22C1510-01	Air	03/26/2022 16:30	03/30/2022 10:20



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2200 South Main Street Suite A

Date Received: March 30, 2022 10:20
Date Issued: April 6, 2022 17:18

Blacksburg, VA 24060

Submitted To: Janet Frazier

Project Number: [none]

Client Site I.D.: Bristol Landfill

Purchase Order:

ANALYTICAL RESULTS

Project Location:

Sample Description/Location:

Initial Vacuum(in Hg): 30

Field Sample #: March 24-HR

Sub Description/Location:

Final Vacuum(in Hg): 0

Sample ID: 22C1510-01

Canister ID: 20591

Receipt Vacuum(in Hg): 0

Sample Matrix: Air

Canister Size: 6

Flow Controller Type: Passive

Sampled: 3/26/2022 16:30

Flow Controller ID: 13289

Sample Type: LG

Volatile Organic Compounds by GCMS EPA TO-15

Analyte	ppbv			Flag/Qual	ug/M ³			Dilution	PF	Date/Time Analyzed	Analyst
	Results	MDL	LOQ		Results	MDL	LOQ				
1,1,1-Trichloroethane	ND	0.60	1.50		ND	3.3	8.2	3	1	4/1/22 19:59	KCS
1,1,1,2-Tetrachloroethane	ND	0.60	1.50		ND	4.1	10	3	1	4/1/22 19:59	KCS
1,1,2,2-Tetrachloroethane	ND	0.60	1.50		ND	4.1	10	3	1	4/1/22 19:59	KCS
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.60	1.50		ND	4.6	11	3	1	4/1/22 19:59	KCS
1,1,2-Trichloroethane	ND	0.60	1.50		ND	3.3	8.2	3	1	4/1/22 19:59	KCS
1,1-Dichloroethane	ND	0.60	1.50		ND	2.4	6.1	3	1	4/1/22 19:59	KCS
1,1-Dichloroethylene	ND	0.60	1.50		ND	2.4	5.9	3	1	4/1/22 19:59	KCS
1,2,4-Trimethylbenzene	ND	0.60	1.50		ND	2.9	7.4	3	1	4/1/22 19:59	KCS
1,2-Dibromoethane (EDB)	ND	0.60	1.50		ND	4.6	12	3	1	4/1/22 19:59	KCS
1,2-Dichlorobenzene	ND	0.60	1.50		ND	3.6	9.0	3	1	4/1/22 19:59	KCS
1,2-Dichloroethane	ND	0.60	1.50		ND	2.4	6.1	3	1	4/1/22 19:59	KCS
1,2-Dichloropropane	ND	0.60	1.50		ND	2.8	6.9	3	1	4/1/22 19:59	KCS
1,2-Dichlorotetrafluoroethane	ND	0.60	1.50		ND	4.2	10	3	1	4/1/22 19:59	KCS
1,3,5-Trimethylbenzene	ND	0.60	1.50		ND	2.9	7.4	3	1	4/1/22 19:59	KCS
1,3-Butadiene	ND	0.60	1.50		ND	1.3	3.3	3	1	4/1/22 19:59	KCS
1,3-Dichlorobenzene	ND	0.60	1.50		ND	3.6	9.0	3	1	4/1/22 19:59	KCS
1,4-Dichlorobenzene	ND	0.60	1.50		ND	3.6	9.0	3	1	4/1/22 19:59	KCS
1,4-Dioxane	ND	0.60	1.50		ND	2.2	5.4	3	1	4/1/22 19:59	KCS
2-Butanone (MEK)	ND	0.60	1.50		ND	1.8	4.4	3	1	4/1/22 19:59	KCS
4-Methyl-2-pentanone (MIBK)	ND	0.60	1.50		ND	6.9	17	3	1	4/1/22 19:59	KCS
Allyl chloride	ND	0.60	1.50		ND	1.9	4.7	3	1	4/1/22 19:59	KCS
Benzene	ND	0.60	1.50		ND	1.9	4.8	3	1	4/1/22 19:59	KCS
Benzyl Chloride	ND	0.60	1.50		ND	3.1	7.8	3	1	4/1/22 19:59	KCS
Bromodichloromethane	ND	0.60	1.50		ND	4.0	10	3	1	4/1/22 19:59	KCS
Bromoform	ND	0.60	1.50		ND	6.2	16	3	1	4/1/22 19:59	KCS
Bromomethane	ND	0.60	1.50		ND	2.3	5.8	3	1	4/1/22 19:59	KCS
Carbon Disulfide	ND	1.50	1.50		ND	4.7	4.7	3	1	4/1/22 19:59	KCS



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2200 South Main Street Suite A

Date Received: March 30, 2022 10:20
Date Issued: April 6, 2022 17:18

Blacksburg, VA 24060

Submitted To: Janet Frazier

Project Number: [none]

Client Site I.D.: Bristol Landfill

Purchase Order:

ANALYTICAL RESULTS

Project Location:
Field Sample #: March 24-HR

Sample ID: 22C1510-01
Sample Matrix: Air
Sampled: 3/26/2022 16:30

Sample Description/Location:
Sub Description/Location:
Canister ID: 20591
Canister Size: 6

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 0
Receipt Vacuum(in Hg): 0
Flow Controller Type: Passive
Flow Controller ID: 13289

Sample Type: LG

Volatile Organic Compounds by GCMS EPA TO-15

Analyte	ppbv			Flag/Qual	ug/M ³			Dilution	PF	Date/Time Analyzed	Analyst
	Results	MDL	LOQ		Results	MDL	LOQ				
Carbon Tetrachloride	ND	0.60	1.50		ND	3.8	9.4	3	1	4/1/22 19:59	KCS
Chlorobenzene	ND	0.60	1.50		ND	2.8	6.9	3	1	4/1/22 19:59	KCS
Chloroethane	ND	0.60	1.50		ND	1.6	4.0	3	1	4/1/22 19:59	KCS
Chloroform	ND	0.60	1.50		ND	2.9	7.3	3	1	4/1/22 19:59	KCS
Chloromethane	ND	0.60	1.50		ND	1.2	3.1	3	1	4/1/22 19:59	KCS
cis-1,2-Dichloroethylene	ND	0.60	1.50		ND	2.4	5.9	3	1	4/1/22 19:59	KCS
cis-1,3-Dichloropropene	ND	0.60	1.50		ND	2.7	6.8	3	1	4/1/22 19:59	KCS
Cyclohexane	ND	0.60	1.50		ND	2.1	5.2	3	1	4/1/22 19:59	KCS
Dichlorodifluoromethane	ND	1.50	1.50		ND	7.4	7.4	3	1	4/1/22 19:59	KCS
Ethyl acetate	ND	0.60	1.50		ND	2.2	5.4	3	1	4/1/22 19:59	KCS
Ethylbenzene	ND	0.60	1.50		ND	2.6	6.5	3	1	4/1/22 19:59	KCS
Heptane	ND	0.60	1.50		ND	2.5	6.1	3	1	4/1/22 19:59	KCS
Hexane	ND	0.60	1.50		ND	2.1	5.3	3	1	4/1/22 19:59	KCS
Isopropylbenzene	ND	0.60	1.50		ND	2.9	7.4	3	1	4/1/22 19:59	KCS
m+p-Xylenes	ND	1.20	3.00		ND	5.2	13	3	1	4/1/22 19:59	KCS
Methyl methacrylate	ND	0.60	1.50		ND	2.5	6.1	3	1	4/1/22 19:59	KCS
Methylene chloride	ND	1.50	3.00		ND	5.2	10	3	1	4/1/22 19:59	KCS
Methyl-t-butyl ether (MTBE)	ND	0.60	1.50		ND	2.2	5.4	3	1	4/1/22 19:59	KCS
Naphthalene	ND	0.60	1.50		ND	3.1	7.9	3	1	4/1/22 19:59	KCS
o-Xylene	ND	0.60	1.50		ND	2.6	6.5	3	1	4/1/22 19:59	KCS
Propylene	0.81	0.60	3.00	J	1.4	1.0	5.2	3	1	4/1/22 19:59	KCS
Styrene	ND	0.60	1.50		ND	2.6	6.4	3	1	4/1/22 19:59	KCS
TBA	ND	1.50	1.50		ND	4.5	4.5	3	1	4/1/22 19:59	KCS
Tetrachloroethylene (PCE)	ND	0.60	1.50		ND	4.1	10	3	1	4/1/22 19:59	KCS
Tetrahydrofuran	ND	0.60	1.50		ND	1.8	4.4	3	1	4/1/22 19:59	KCS
Toluene	ND	0.60	1.50		ND	2.3	5.7	3	1	4/1/22 19:59	KCS
trans-1,2-Dichloroethylene	ND	0.60	1.50		ND	2.4	5.9	3	1	4/1/22 19:59	KCS



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2200 South Main Street Suite A

Date Received: March 30, 2022 10:20
Date Issued: April 6, 2022 17:18

Blacksburg, VA 24060

Submitted To: Janet Frazier

Project Number: [none]

Client Site I.D.: Bristol Landfill

Purchase Order:

ANALYTICAL RESULTS

Project Location:

Sample Description/Location:

Initial Vacuum(in Hg): 30

Field Sample #: March 24-HR

Sub Description/Location:

Final Vacuum(in Hg): 0

Sample ID: 22C1510-01

Canister ID: 20591

Receipt Vacuum(in Hg): 0

Sample Matrix: Air

Canister Size: 6

Flow Controller Type: Passive

Sampled: 3/26/2022 16:30

Flow Controller ID: 13289

Sample Type: LG

Volatile Organic Compounds by GCMS EPA TO-15

Analyte	ppbv			Flag/Qual	ug/M ³			Dilution	PF	Date/Time Analyzed	Analyst
	Results	MDL	LOQ		Results	MDL	LOQ				
trans-1,3-Dichloropropene	ND	0.60	1.50		ND	2.7	6.8	3	1	4/1/22 19:59	KCS
Trichloroethylene	ND	0.60	1.50		ND	3.2	8.1	3	1	4/1/22 19:59	KCS
Trichlorofluoromethane	ND	1.50	1.50		ND	8.4	8.4	3	1	4/1/22 19:59	KCS
Vinyl acetate	ND	0.60	1.50		ND	2.1	5.3	3	1	4/1/22 19:59	KCS
Vinyl bromide	ND	0.60	1.50		ND	2.6	6.6	3	1	4/1/22 19:59	KCS
Vinyl chloride	ND	0.60	1.50		ND	1.5	3.8	3	1	4/1/22 19:59	KCS
Xylenes, Total	ND	1.80	4.50		ND	7.8	20	3	1	4/1/22 19:59	KCS
Surrogate(s)	% Recovery				% Recovery Limits						
4-Bromofluorobenzene (Surr)	93.0				80-120					4/1/22 19:59	



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Submitted To: Janet Frazier

Project Number: [none]

Client Site I.D.: Bristol Landfill

Purchase Order:

Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GCMS			Preparation Method:	No Prep VOC Air	
22C1510-01	400 mL / 400 mL	EPA TO-15	BFD0023	SFD0100	AB20074



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Submitted To: Janet Frazier

Project Number: [none]

Client Site I.D.: Bristol Landfill

Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Reporting		Spike	Source	%REC		RPD	RPD	Limit	Qual
	Result	Limit			%REC	Limits				

Batch BFD0023 - No Prep VOC Air

Blank (BFD0023-BLK1)

Prepared & Analyzed: 03/31/2022

1,1,1-Trichloroethane	<	0.50	ppbv
1,1,1,2-Tetrachloroethane	<	0.50	ppbv
1,1,2,2-Tetrachloroethane	<	0.50	ppbv
1,1,2-Trichloro-1,2,2-trifluoroethane	<	0.50	ppbv
1,1,2-Trichloroethane	<	0.50	ppbv
1,1-Dichloroethane	<	0.50	ppbv
1,1-Dichloroethylene	<	0.50	ppbv
1,2,4-Trimethylbenzene	<	0.50	ppbv
1,2-Dibromoethane (EDB)	<	0.50	ppbv
1,2-Dichlorobenzene	<	0.50	ppbv
1,2-Dichloroethane	<	0.50	ppbv
1,2-Dichloropropane	<	0.50	ppbv
1,2-Dichlorotetrafluoroethane	<	0.50	ppbv
1,3,5-Trimethylbenzene	<	0.50	ppbv
1,3-Butadiene	<	0.50	ppbv
1,3-Dichlorobenzene	<	0.50	ppbv
1,4-Dichlorobenzene	<	0.50	ppbv
1,4-Dioxane	<	0.50	ppbv
2-Butanone (MEK)	<	0.50	ppbv
4-Methyl-2-pentanone (MIBK)	<	0.50	ppbv
Allyl chloride	<	0.50	ppbv
Benzene	<	0.50	ppbv
Benzyl Chloride	<	0.50	ppbv
Bromodichloromethane	<	0.50	ppbv
Bromoform	<	0.50	ppbv
Bromomethane	<	0.50	ppbv
Carbon Disulfide	<	0.50	ppbv
Carbon Tetrachloride	<	0.50	ppbv
Chlorobenzene	<	0.50	ppbv
Chloroethane	<	0.50	ppbv
Chloroform	<	0.50	ppbv



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Submitted To: Janet Frazier

Project Number: [none]

Client Site I.D.: Bristol Landfill

Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Reporting		Spike	Source	%REC		RPD		Qual
	Result	Limit			%REC	Limits	RPD	Limit	

Batch BFD0023 - No Prep VOC Air

Blank (BFD0023-BLK1)

Prepared & Analyzed: 03/31/2022

Chloromethane	<	0.50	ppbv						
cis-1,2-Dichloroethylene	<	0.50	ppbv						
cis-1,3-Dichloropropene	<	0.50	ppbv						
Cyclohexane	<	0.50	ppbv						
Dichlorodifluoromethane	<	0.50	ppbv						
Ethyl acetate	<	0.50	ppbv						
Ethylbenzene	<	0.50	ppbv						
Heptane	<	0.50	ppbv						
Hexane	<	0.50	ppbv						
Isopropylbenzene	<	0.50	ppbv						
m+p-Xylenes	<	1.00	ppbv						
Methyl methacrylate	<	0.50	ppbv						
Methylene chloride	<	1.00	ppbv						
Methyl-t-butyl ether (MTBE)	<	0.50	ppbv						
Naphthalene	<	0.50	ppbv						
o-Xylene	<	0.50	ppbv						
Propylene	0.27	1.00	ppbv						
Styrene	<	0.50	ppbv						
TBA	<	0.50	ppbv						
Tetrachloroethylene (PCE)	<	0.50	ppbv						
Tetrahydrofuran	<	0.50	ppbv						
Toluene	<	0.50	ppbv						
trans-1,2-Dichloroethylene	<	0.50	ppbv						
trans-1,3-Dichloropropene	<	0.50	ppbv						
Trichloroethylene	<	0.50	ppbv						
Trichlorofluoromethane	<	0.50	ppbv						
Vinyl acetate	<	0.50	ppbv						
Vinyl bromide	<	0.50	ppbv						
Vinyl chloride	<	0.50	ppbv						
Xylenes, Total	<	1.50	ppbv						

Surr: 4-Bromofluorobenzene 4.66 ppbv 5.00 93.2 80-120
(Surr)



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Submitted To: Janet Frazier

Project Number: [none]

Client Site I.D.: Bristol Landfill

Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Reporting		Spike	Source	%REC		RPD		Qual
	Result	Limit			%REC	Limits	RPD	Limit	

Batch BFD0023 - No Prep VOC Air

LCS (BFD0023-BS1)

Prepared & Analyzed: 03/31/2022

1,1,1-Trichloroethane	6.09	0.5	ppbv	5.00	122	70-130
1,1,2,2-Tetrachloroethane	5.45	0.5	ppbv	5.00	109	70-130
1,1,2-Trichloro-1,2,2-trifluoroethane	5.63	0.5	ppbv	5.00	113	70-130
1,1,2-Trichloroethane	5.71	0.5	ppbv	5.00	114	70-130
1,1-Dichloroethane	5.78	0.5	ppbv	5.00	116	70-130
1,1-Dichloroethylene	5.46	0.5	ppbv	5.00	109	70-130
1,2,4-Trimethylbenzene	5.74	0.5	ppbv	5.00	115	70-130
1,2-Dibromoethane (EDB)	5.88	0.5	ppbv	5.00	118	70-130
1,2-Dichlorobenzene	5.84	0.5	ppbv	5.00	117	70-130
1,2-Dichloroethane	6.04	0.5	ppbv	5.00	121	70-130
1,2-Dichloropropane	5.92	0.5	ppbv	5.00	118	70-130
1,2-Dichlorotetrafluoroethane	5.53	0.5	ppbv	5.00	111	70-130
1,3,5-Trimethylbenzene	5.60	0.5	ppbv	5.00	112	70-130
1,3-Butadiene	4.76	0.5	ppbv	5.00	95.2	70-130
1,3-Dichlorobenzene	5.71	0.5	ppbv	5.00	114	70-130
1,4-Dichlorobenzene	5.86	0.5	ppbv	5.00	117	70-130
1,4-Dioxane	5.74	0.5	ppbv	5.00	115	70-130
2-Butanone (MEK)	5.26	0.5	ppbv	5.00	105	70-130
4-Methyl-2-pentanone (MIBK)	5.94	0.5	ppbv	5.00	119	70-130
Allyl chloride	5.99	0.5	ppbv	5.00	120	70-130
Benzene	5.76	0.5	ppbv	5.00	115	70-130
Benzyl Chloride	6.36	0.5	ppbv	5.00	127	70-130
Bromodichloromethane	6.11	0.5	ppbv	5.00	122	70-130
Bromoform	6.45	0.5	ppbv	5.00	129	70-130
Bromomethane	5.28	0.5	ppbv	5.00	106	70-130
Carbon Disulfide	6.20	0.5	ppbv	5.00	124	70-130
Carbon Tetrachloride	6.01	0.5	ppbv	5.00	120	70-130
Chlorobenzene	5.70	0.5	ppbv	5.00	114	70-130
Chloroethane	4.95	0.5	ppbv	5.00	99.0	70-130
Chloroform	5.58	0.5	ppbv	5.00	112	70-130
Chloromethane	4.74	0.5	ppbv	5.00	94.8	70-130
cis-1,2-Dichloroethylene	5.75	0.5	ppbv	5.00	115	70-130
cis-1,3-Dichloropropene	6.30	0.5	ppbv	5.00	126	70-130



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Blacksburg, VA 24060

Submitted To: Janet Frazier

Project Number: [none]

Client Site I.D.: Bristol Landfill

Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Reporting			Spike Level	Source Result	%REC		RPD		Qual
	Result	Limit	Units			%REC	Limits	RPD	Limit	

Batch BFD0023 - No Prep VOC Air

LCS (BFD0023-BS1)

Prepared & Analyzed: 03/31/2022

Cyclohexane	5.60	0.5	ppbv	5.00	112	70-130				
Dichlorodifluoromethane	5.11	0.5	ppbv	5.00	102	70-130				
Ethyl acetate	5.50	0.5	ppbv	5.00	110	70-130				
Ethylbenzene	5.90	0.5	ppbv	5.00	118	70-130				
Heptane	5.79	0.5	ppbv	5.00	116	70-130				
Hexane	5.53	0.5	ppbv	5.00	111	70-130				
m+p-Xylenes	11.4	1	ppbv	10.0	114	70-130				
Methylene chloride	5.51	1	ppbv	5.00	110	70-130				
Methyl-t-butyl ether (MTBE)	6.05	0.5	ppbv	5.00	121	70-130				
Naphthalene	6.32	0.5	ppbv	5.00	126	60-140				
o-Xylene	5.59	0.5	ppbv	5.00	112	70-130				
Propylene	5.50	1	ppbv	5.00	110	70-130				
Styrene	6.15	0.5	ppbv	5.00	123	70-130				
Tetrachloroethylene (PCE)	5.96	0.5	ppbv	5.00	119	70-130				
Tetrahydrofuran	6.11	0.5	ppbv	5.00	122	70-130				
Toluene	5.90	0.5	ppbv	5.00	118	70-130				
trans-1,2-Dichloroethylene	5.71	0.5	ppbv	5.00	114	70-130				
trans-1,3-Dichloropropene	6.49	0.5	ppbv	5.00	130	70-130				
Trichloroethylene	5.61	0.5	ppbv	5.00	112	70-130				
Trichlorofluoromethane	5.24	0.5	ppbv	5.00	105	70-130				
Vinyl acetate	6.72	0.5	ppbv	5.00	134	70-130				L
Vinyl bromide	5.49	0.5	ppbv	5.00	110	70-130				
Vinyl chloride	5.01	0.5	ppbv	5.00	100	70-130				
Surr: 4-Bromofluorobenzene (Surr)	5.04		ppbv	5.00	101	70-130				

LCS Dup (BFD0023-BSD1)

Prepared: 03/31/2022 Analyzed: 04/01/2022

1,1,1-Trichloroethane	6.01	0.5	ppbv	5.00	120	70-130	1.32	25		
1,1,2,2-Tetrachloroethane	5.42	0.5	ppbv	5.00	108	70-130	0.552	25		
1,1,2-Trichloro-1,2,2-trifluoroethane	5.64	0.5	ppbv	5.00	113	70-130	0.177	25		
1,1,2-Trichloroethane	5.59	0.5	ppbv	5.00	112	70-130	2.12	25		
1,1-Dichloroethane	5.64	0.5	ppbv	5.00	113	70-130	2.45	25		
1,1-Dichloroethylene	5.34	0.5	ppbv	5.00	107	70-130	2.22	25		
1,2,4-Trimethylbenzene	5.62	0.5	ppbv	5.00	112	70-130	2.11	25		



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Certificate of Analysis

Final Report

Laboratory Order ID 22C1510

Client Name: Draper Aden Associates-Blacksburg
2200 South Main Street Suite A

Date Received: March 30, 2022 10:20
Date Issued: April 6, 2022 17:18

Blacksburg, VA 24060

Submitted To: Janet Frazier

Project Number: [none]

Client Site I.D.: Bristol Landfill

Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Reporting		Spike	Source	%REC		RPD		Qual
	Result	Limit			%REC	Limits	RPD	Limit	

Batch BFD0023 - No Prep VOC Air

LCS Dup (BFD0023-BSD1)

Prepared: 03/31/2022 Analyzed: 04/01/2022

1,2-Dibromoethane (EDB)	5.89	0.5	ppbv	5.00	118	70-130	0.170	25
1,2-Dichlorobenzene	5.82	0.5	ppbv	5.00	116	70-130	0.343	25
1,2-Dichloroethane	5.92	0.5	ppbv	5.00	118	70-130	2.01	25
1,2-Dichloropropane	5.80	0.5	ppbv	5.00	116	70-130	2.05	25
1,2-Dichlorotetrafluoroethane	5.55	0.5	ppbv	5.00	111	70-130	0.361	25
1,3,5-Trimethylbenzene	5.50	0.5	ppbv	5.00	110	70-130	1.80	25
1,3-Butadiene	4.77	0.5	ppbv	5.00	95.4	70-130	0.210	25
1,3-Dichlorobenzene	5.66	0.5	ppbv	5.00	113	70-130	0.880	25
1,4-Dichlorobenzene	5.85	0.5	ppbv	5.00	117	70-130	0.171	25
1,4-Dioxane	5.76	0.5	ppbv	5.00	115	70-130	0.348	25
2-Butanone (MEK)	5.13	0.5	ppbv	5.00	103	70-130	2.50	25
4-Methyl-2-pentanone (MIBK)	5.80	0.5	ppbv	5.00	116	70-130	2.39	25
Allyl chloride	5.89	0.5	ppbv	5.00	118	70-130	1.68	25
Benzene	5.79	0.5	ppbv	5.00	116	70-130	0.519	25
Benzyl Chloride	6.37	0.5	ppbv	5.00	127	70-130	0.157	25
Bromodichloromethane	5.96	0.5	ppbv	5.00	119	70-130	2.49	25
Bromoform	6.38	0.5	ppbv	5.00	128	70-130	1.09	25
Bromomethane	5.21	0.5	ppbv	5.00	104	70-130	1.33	25
Carbon Disulfide	6.05	0.5	ppbv	5.00	121	70-130	2.45	25
Carbon Tetrachloride	6.01	0.5	ppbv	5.00	120	70-130	0.00	25
Chlorobenzene	5.68	0.5	ppbv	5.00	114	70-130	0.351	25
Chloroethane	4.86	0.5	ppbv	5.00	97.2	70-130	1.83	25
Chloroform	5.52	0.5	ppbv	5.00	110	70-130	1.08	25
Chloromethane	4.75	0.5	ppbv	5.00	95.0	70-130	0.211	25
cis-1,2-Dichloroethylene	5.69	0.5	ppbv	5.00	114	70-130	1.05	25
cis-1,3-Dichloropropene	6.14	0.5	ppbv	5.00	123	70-130	2.57	25
Cyclohexane	5.53	0.5	ppbv	5.00	111	70-130	1.26	25
Dichlorodifluoromethane	5.07	0.5	ppbv	5.00	101	70-130	0.786	25
Ethyl acetate	5.43	0.5	ppbv	5.00	109	70-130	1.28	25
Ethylbenzene	5.91	0.5	ppbv	5.00	118	70-130	0.169	25
Heptane	5.70	0.5	ppbv	5.00	114	70-130	1.57	25
Hexane	5.46	0.5	ppbv	5.00	109	70-130	1.27	25
m+p-Xylenes	11.4	1	ppbv	10.0	114	70-130	0.175	25
Methylene chloride	5.38	1	ppbv	5.00	108	70-130	2.39	25



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Final Report

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2200 South Main Street Suite A

Date Received: March 30, 2022 10:20
Date Issued: April 6, 2022 17:18

Blacksburg, VA 24060

Submitted To: Janet Frazier

Project Number: [none]

Client Site I.D.: Bristol Landfill

Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Reporting			Spike Level	Source Result	%REC		RPD	Limit	Qual
	Result	Limit	Units			%REC	Limits			

Batch BFD0023 - No Prep VOC Air

LCS Dup (BFD0023-BSD1)

Prepared: 03/31/2022 Analyzed: 04/01/2022

Methyl-t-butyl ether (MTBE)	5.95	0.5	ppbv	5.00	119	70-130	1.67	25	
Naphthalene	6.32	0.5	ppbv	5.00	126	60-140	0.00	25	
o-Xylene	5.58	0.5	ppbv	5.00	112	70-130	0.179	25	
Propylene	5.26	1	ppbv	5.00	105	70-130	4.46	25	
Styrene	6.18	0.5	ppbv	5.00	124	70-130	0.487	25	
Tetrachloroethylene (PCE)	5.88	0.5	ppbv	5.00	118	70-130	1.35	25	
Tetrahydrofuran	6.00	0.5	ppbv	5.00	120	70-130	1.82	25	
Toluene	5.83	0.5	ppbv	5.00	117	70-130	1.19	25	
trans-1,2-Dichloroethylene	5.55	0.5	ppbv	5.00	111	70-130	2.84	25	
trans-1,3-Dichloropropene	6.36	0.5	ppbv	5.00	127	70-130	2.02	25	
Trichloroethylene	5.46	0.5	ppbv	5.00	109	70-130	2.71	25	
Trichlorofluoromethane	5.16	0.5	ppbv	5.00	103	70-130	1.54	25	
Vinyl acetate	6.42	0.5	ppbv	5.00	128	70-130	4.57	25	
Vinyl bromide	5.41	0.5	ppbv	5.00	108	70-130	1.47	25	
Vinyl chloride	5.06	0.5	ppbv	5.00	101	70-130	0.993	25	
Surr: 4-Bromofluorobenzene (Surr)	5.03		ppbv	5.00	101	70-130			

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Blacksburg, VA 24060

Submitted To: Janet Frazier

Project Number: [none]

Client Site I.D.: Bristol Landfill

Purchase Order:

Certified Analytes included in this Report

Analyte	Certifications	Analyte	Certifications
EPA TO-15 in Air		Isopropylbenzene	VELAP
1,1,1-Trichloroethane	VELAP	m+p-Xylenes	VELAP
1,1,1,2-Tetrachloroethane	VELAP	Methyl methacrylate	VELAP
1,1,2,2-Tetrachloroethane	VELAP	Methylene chloride	VELAP
1,1,2-Trichloro-1,2,2-trifluoroethane	VELAP	Methyl-t-butyl ether (MTBE)	VELAP
1,1,2-Trichloroethane	VELAP	Naphthalene	VELAP
1,1-Dichloroethane	VELAP	o-Xylene	VELAP
1,1-Dichloroethylene	VELAP	Propylene	VELAP
1,2,4-Trimethylbenzene	VELAP	Styrene	VELAP
1,2-Dibromoethane (EDB)	VELAP	TBA	VELAP
1,2-Dichlorobenzene	VELAP	Tetrachloroethylene (PCE)	VELAP
1,2-Dichloroethane	VELAP	Tetrahydrofuran	VELAP
1,2-Dichloropropane	VELAP	Toluene	VELAP
1,2-Dichlorotetrafluoroethane	VELAP	trans-1,2-Dichloroethylene	VELAP
1,3,5-Trimethylbenzene	VELAP	trans-1,3-Dichloropropene	VELAP
1,3-Butadiene	VELAP	Trichloroethylene	VELAP
1,3-Dichlorobenzene	VELAP	Trichlorofluoromethane	VELAP
1,4-Dichlorobenzene	VELAP	Vinyl acetate	VELAP
1,4-Dioxane	VELAP	Vinyl bromide	VELAP
2-Butanone (MEK)	VELAP	Vinyl chloride	VELAP
4-Methyl-2-pentanone (MIBK)	VELAP	Xylenes, Total	VELAP
Allyl chloride	VELAP		
Benzene	VELAP		
Benzyl Chloride	VELAP		
Bromodichloromethane	VELAP		
Bromoform	VELAP		
Bromomethane	VELAP		
Carbon Disulfide	VELAP		
Carbon Tetrachloride	VELAP		
Chlorobenzene	VELAP		
Chloroethane	VELAP		
Chloroform	VELAP		
Chloromethane	VELAP		
cis-1,2-Dichloroethylene	VELAP		
cis-1,3-Dichloropropene	VELAP		
Cyclohexane	VELAP		
Dichlorodifluoromethane	VELAP		
Ethyl acetate	VELAP		
Ethylbenzene	VELAP		
Heptane	VELAP		
Hexane	VELAP		



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Final Report

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2200 South Main Street Suite A

Date Received: March 30, 2022 10:20
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Blacksburg, VA 24060

Submitted To: Janet Frazier

Project Number: [none]

Client Site I.D.: Bristol Landfill

Purchase Order:

Code	Description	Laboratory ID	Expires
MADEP	Massachusetts DEP	M-VA913	06/30/2022
MdDOE	Maryland DE Drinking Water	341	12/31/2022
NC	North Carolina DENR	495	07/31/2022
NCDEQ	North Carolina DEQ	495	12/31/2022
NCDOH	North Carolina Department of Health	51714	07/31/2022
NJDEP	NELAP-New Jersey DEP	VA015	06/30/2022
PADEP	NELAP-Pennsylvania Certificate #007	68-03503	10/31/2022
VELAP	NELAP-Virginia Certificate #11739	460021	06/14/2022

Qualifiers and Definitions

J The reported result is an estimated value.

L LCS recovery is outside of established acceptance limits

RPD Relative Percent Difference

Qual Qualifiers

-RE Denotes sample was re-analyzed

PF Preparation Factor

MDL Method Detection Limit

LOQ Limit of Quantitation

ppbv parts per billion by volume

TIC Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library. A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.

All EPA method 3C results are reported as normalized values when the sum total of all evaluated constituents is outside $\pm 10\%$ of the absolute.

AIR ANALYSIS

CHAIN OF CUSTODY Equipment Must be Returned By: **4/15/22**

COMPANY NAME: Draper Aden Blacksburg	INVOICE TO: Same	PROJECT NAME/Quote #: Bristol
CONTACT:	INVOICE CONTACT:	SITE NAME: BRISTOL, VA LANDFILL
ADDRESS: 2206 South Main Street	INVOICE ADDRESS:	PROJECT NUMBER:
PHONE #:	INVOICE PHONE #:	P.O. #:
FAX #:	EMAIL: ZAC MITCHELL@BRISTOLVA.ORG	Pretreatment Program:
Is sample for compliance reporting? YES NO		Is sample from a chlorinated supply? YES NO
Regulatory State:		PWS I.D. #:
SAMPLER NAME (PRINT): ZAC MITCHELL SAMPLER SIGNATURE: <i>Zac Mitchell</i> Turn Around Time: Circle: 10 5 Days or Day(s)		

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other

CLIENT SAMPLE I.D.	Regulator Info			Canister Information			Sampling Start Information				Sampling Stop Information				ANALYSIS	
	Flow Controller ID	Cal Flow (mL/min)	Canister ID	Cleaning Batch ID	LAB Outgoing Canister Vacuum (in Hg)	LAB Receiving Canister Vacuum (in Hg)	Barometric Pres. (in Hg):		Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	TO-15 VOC
							Start Date	Start Time (24hr clock)								
1) MARCH 24-HR	13289	24HR	20591	6	30		3/25/22	3:30PM	28		3/26/22	4:30PM			LG	X
2)																
3)																
4)																

20.7°C 310 NOICE NOSEA

RELINQUISHED: <i>Zac Mitchell</i> 3/29/22 7:30PM	RECEIVED: <i>FedEx E</i>	DATE / TIME
RELINQUISHED: <i>FedEx E</i>	RECEIVED: <i>1 Daily Supply 3/29/22 10:00</i>	DATE / TIME
RELINQUISHED: <i>FedEx E</i>	RECEIVED:	DATE / TIME

QC Data Package LAB USE ONLY

Level I	☐
Level II	☐
Level III	☐
Level IV	☐

DA-Blacksburg 22C1510
Bristol Landfill - Landfill Gas
Recd: 03/30/2022 Due: 04/06/2022