

March 30, 2021

Mr. Mark Campbell
Bristol Solid Waste Management Facility
2125 Shakesville Rd
Bristol, VA 24201

RE: Project: City of Bristol Landfill
Pace Project No.: 92529286

Dear Mr. Campbell:

Enclosed are the analytical results for sample(s) received by the laboratory on March 23, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace National - Mt. Juliet

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ryan Brumfield
ryan.brumfield@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Ms. Carrie Blankenship, Draper Aden Associates
Ms. Janet Frazier, Draper Aden Associates
Kathy Olsen, Draper Aden Associates



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: City of Bristol Landfill

Pace Project No.: 92529286

Pace Analytical Services National

12065 Lebanon Road, Mt. Juliet, TN 37122

Alabama Certification #: 40660

Alaska Certification #: 17-026

Arizona Certification #: AZ0612

Arkansas Certification #: 88-0469

California Certification #: 2932

Canada Certification #: 1461.01

Colorado Certification #: TN00003

Connecticut Certification #: PH-0197

DOD Certification #: #1461.01

EPA# TN00003

Florida Certification #: E87487

Georgia DW Certification #: 923

Georgia Certification: NELAP

Idaho Certification #: TN00003

Illinois Certification #: 200008

Indiana Certification #: C-TN-01

Iowa Certification #: 364

Kansas Certification #: E-10277

Kentucky UST Certification #: 16

Kentucky Certification #: 90010

Louisiana Certification #: AI30792

Louisiana DW Certification #: LA180010

Maine Certification #: TN0002

Maryland Certification #: 324

Massachusetts Certification #: M-TN003

Michigan Certification #: 9958

Minnesota Certification #: 047-999-395

Mississippi Certification #: TN00003

Missouri Certification #: 340

Montana Certification #: CERT0086

Nebraska Certification #: NE-OS-15-05

Nevada Certification #: TN-03-2002-34

New Hampshire Certification #: 2975

New Jersey Certification #: TN002

New Mexico DW Certification

New York Certification #: 11742

North Carolina Aquatic Toxicity Certification #: 41

North Carolina Drinking Water Certification #: 21704

North Carolina Environmental Certificate #: 375

North Dakota Certification #: R-140

Ohio VAP Certification #: CL0069

Oklahoma Certification #: 9915

Oregon Certification #: TN200002

Pennsylvania Certification #: 68-02979

Rhode Island Certification #: LA000356

South Carolina Certification #: 84004

South Dakota Certification

Tennessee DW/Chem/Micro Certification #: 2006

Texas Certification #: T 104704245-17-14

Texas Mold Certification #: LAB0152

USDA Soil Permit #: P330-15-00234

Utah Certification #: TN00003

Virginia Certification #: VT2006

Vermont Dept. of Health: ID# VT-2006

Virginia Certification #: 460132

Washington Certification #: C847

West Virginia Certification #: 233

Wisconsin Certification #: 998093910

Wyoming UST Certification #: via A2LA 2926.01

A2LA-ISO 17025 Certification #: 1461.01

A2LA-ISO 17025 Certification #: 1461.02

AIHA-LAP/LLC EMLAP Certification #:100789

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SAMPLE SUMMARY

Project: City of Bristol Landfill

Pace Project No.: 92529286

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92529286001	March Comp	Air	03/20/21 09:55	03/23/21 10:00

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SAMPLE ANALYTE COUNT

Project: City of Bristol Landfill

Pace Project No.: 92529286

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92529286001	March Comp	TO-15	CAW	68	PAN

PAN = Pace National - Mt. Juliet

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SUMMARY OF DETECTION

Project: City of Bristol Landfill

Pace Project No.: 92529286

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92529286001	March Comp					
TO-15	Acetone	9.34	ug/m3	2.97	03/27/21 14:55	
TO-15	Benzene	9.26	ug/m3	0.639	03/27/21 14:55	
TO-15	Carbon tetrachloride	0.567J	ug/m3	1.26	03/27/21 14:55	J
TO-15	Chloromethane	1.56	ug/m3	0.413	03/27/21 14:55	
TO-15	Ethanol	4.86	ug/m3	1.19	03/27/21 14:55	
TO-15	Ethylbenzene	0.993	ug/m3	0.867	03/27/21 14:55	
TO-15	Trichlorofluoromethane	1.56	ug/m3	1.12	03/27/21 14:55	
TO-15	Dichlorodifluoromethane	3.00	ug/m3	0.989	03/27/21 14:55	
TO-15	1,1,2-Trichlorotrifluoroethane	0.618J	ug/m3	1.53	03/27/21 14:55	J
TO-15	Methylene Chloride	0.465J	ug/m3	0.694	03/27/21 14:55	J
TO-15	Propylene	1.72	ug/m3	0.689	03/27/21 14:55	
TO-15	Toluene	1.47J	ug/m3	1.88	03/27/21 14:55	J
TO-15	Vinyl chloride	1.04	ug/m3	0.511	03/27/21 14:55	
TO-15	m&p-Xylene	1.01J	ug/m3	1.73	03/27/21 14:55	J
TO-15	o-Xylene	0.405J	ug/m3	0.867	03/27/21 14:55	J

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: City of Bristol Landfill

Pace Project No.: 92529286

Method: TO-15

Description: VOA (MS) TO-15

Client: Draper Aden - Virginia

Date: March 30, 2021

General Information:

1 sample was analyzed for TO-15 by Pace National Mt. Juliet. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: City of Bristol Landfill
Pace Project No.: 92529286

Sample: March Comp		Lab ID: 92529286001		Collected: 03/20/21 09:55		Received: 03/23/21 10:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15		Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet							
Acetone	9.34	ug/m3	2.97	1.39	1	03/27/21 14:55	03/27/21 14:55	67-64-1	
Allyl chloride	ND	ug/m3	0.626	0.357	1	03/27/21 14:55	03/27/21 14:55	107-05-1	
Benzene	9.26	ug/m3	0.639	0.228	1	03/27/21 14:55	03/27/21 14:55	71-43-2	
Benzyl chloride	ND	ug/m3	1.04	0.311	1	03/27/21 14:55	03/27/21 14:55	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.471	1	03/27/21 14:55	03/27/21 14:55	75-27-4	
Bromoform	ND	ug/m3	6.21	0.757	1	03/27/21 14:55	03/27/21 14:55	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.381	1	03/27/21 14:55	03/27/21 14:55	74-83-9	
1,3-Butadiene	ND	ug/m3	4.43	0.230	1	03/27/21 14:55	03/27/21 14:55	106-99-0	
Carbon disulfide	ND	ug/m3	0.622	0.317	1	03/27/21 14:55	03/27/21 14:55	75-15-0	
Carbon tetrachloride	0.567J	ug/m3	1.26	0.461	1	03/27/21 14:55	03/27/21 14:55	56-23-5	J
Chlorobenzene	ND	ug/m3	0.924	0.385	1	03/27/21 14:55	03/27/21 14:55	108-90-7	
Chloroethane	ND	ug/m3	0.528	0.263	1	03/27/21 14:55	03/27/21 14:55	75-00-3	
Chloroform	ND	ug/m3	0.973	0.349	1	03/27/21 14:55	03/27/21 14:55	67-66-3	
Chloromethane	1.56	ug/m3	0.413	0.213	1	03/27/21 14:55	03/27/21 14:55	74-87-3	
2-Chlorotoluene	ND	ug/m3	1.03	0.427	1	03/27/21 14:55	03/27/21 14:55	95-49-8	
Cyclohexane	ND	ug/m3	0.689	0.259	1	03/27/21 14:55	03/27/21 14:55	110-82-7	
Dibromochloromethane	ND	ug/m3	1.70	0.618	1	03/27/21 14:55	03/27/21 14:55	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.554	1	03/27/21 14:55	03/27/21 14:55	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.770	1	03/27/21 14:55	03/27/21 14:55	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	1.09	1	03/27/21 14:55	03/27/21 14:55	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	1.20	0.335	1	03/27/21 14:55	03/27/21 14:55	106-46-7	
1,2-Dichloroethane	ND	ug/m3	0.810	0.283	1	03/27/21 14:55	03/27/21 14:55	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.290	1	03/27/21 14:55	03/27/21 14:55	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.302	1	03/27/21 14:55	03/27/21 14:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.793	0.311	1	03/27/21 14:55	03/27/21 14:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.793	0.267	1	03/27/21 14:55	03/27/21 14:55	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.924	0.351	1	03/27/21 14:55	03/27/21 14:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.313	1	03/27/21 14:55	03/27/21 14:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.331	1	03/27/21 14:55	03/27/21 14:55	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	0.721	0.300	1	03/27/21 14:55	03/27/21 14:55	123-91-1	
Ethanol	4.86	ug/m3	1.19	0.500	1	03/27/21 14:55	03/27/21 14:55	64-17-5	
Ethylbenzene	0.993	ug/m3	0.867	0.362	1	03/27/21 14:55	03/27/21 14:55	100-41-4	
4-Ethyltoluene	ND	ug/m3	0.982	0.384	1	03/27/21 14:55	03/27/21 14:55	622-96-8	
Trichlorofluoromethane	1.56	ug/m3	1.12	0.460	1	03/27/21 14:55	03/27/21 14:55	75-69-4	
Dichlorodifluoromethane	3.00	ug/m3	0.989	0.678	1	03/27/21 14:55	03/27/21 14:55	75-71-8	
1,1,2-Trichlorotrifluoroethane	0.618J	ug/m3	1.53	0.608	1	03/27/21 14:55	03/27/21 14:55	76-13-1	J
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.622	1	03/27/21 14:55	03/27/21 14:55	76-14-2	
n-Heptane	ND	ug/m3	0.818	0.425	1	03/27/21 14:55	03/27/21 14:55	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	1.12	1	03/27/21 14:55	03/27/21 14:55	87-68-3	
n-Hexane	ND	ug/m3	2.22	0.726	1	03/27/21 14:55	03/27/21 14:55	110-54-3	
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.382	1	03/27/21 14:55	03/27/21 14:55	98-82-8	
Methylene Chloride	0.465J	ug/m3	0.694	0.340	1	03/27/21 14:55	03/27/21 14:55	75-09-2	J
2-Hexanone	ND	ug/m3	5.11	0.544	1	03/27/21 14:55	03/27/21 14:55	591-78-6	
2-Butanone (MEK)	ND	ug/m3	3.69	0.240	1	03/27/21 14:55	03/27/21 14:55	78-93-3	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	5.12	0.313	1	03/27/21 14:55	03/27/21 14:55	108-10-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: City of Bristol Landfill

Pace Project No.: 92529286

Sample: March Comp		Lab ID: 92529286001		Collected: 03/20/21 09:55		Received: 03/23/21 10:00		Matrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15		Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet							
Methyl methacrylate	ND	ug/m3	0.819	0.359	1	03/27/21 14:55	03/27/21 14:55	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.233	1	03/27/21 14:55	03/27/21 14:55	1634-04-4	
Naphthalene	ND	ug/m3	3.30	1.83	1	03/27/21 14:55	03/27/21 14:55	91-20-3	
2-Propanol	ND	ug/m3	3.07	0.649	1	03/27/21 14:55	03/27/21 14:55	67-63-0	
Propylene	1.72	ug/m3	0.689	0.160	1	03/27/21 14:55	03/27/21 14:55	115-07-1	
Styrene	ND	ug/m3	0.851	0.335	1	03/27/21 14:55	03/27/21 14:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.511	1	03/27/21 14:55	03/27/21 14:55	79-34-5	
Tetrachloroethene	ND	ug/m3	1.36	0.553	1	03/27/21 14:55	03/27/21 14:55	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.590	0.216	1	03/27/21 14:55	03/27/21 14:55	109-99-9	
Toluene	1.47J	ug/m3	1.88	0.328	1	03/27/21 14:55	03/27/21 14:55	108-88-3	J
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	1.10	1	03/27/21 14:55	03/27/21 14:55	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.400	1	03/27/21 14:55	03/27/21 14:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.422	1	03/27/21 14:55	03/27/21 14:55	79-00-5	
Trichloroethene	ND	ug/m3	1.07	0.364	1	03/27/21 14:55	03/27/21 14:55	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	0.982	0.375	1	03/27/21 14:55	03/27/21 14:55	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	0.982	0.382	1	03/27/21 14:55	03/27/21 14:55	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	0.934	0.621	1	03/27/21 14:55	03/27/21 14:55	540-84-1	
Vinyl chloride	1.04	ug/m3	0.511	0.243	1	03/27/21 14:55	03/27/21 14:55	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.373	1	03/27/21 14:55	03/27/21 14:55	593-60-2	
Vinyl acetate	ND	ug/m3	0.704	0.408	1	03/27/21 14:55	03/27/21 14:55	108-05-4	
m&p-Xylene	1.01J	ug/m3	1.73	0.585	1	03/27/21 14:55	03/27/21 14:55	179601-23-1	J
o-Xylene	0.405J	ug/m3	0.867	0.359	1	03/27/21 14:55	03/27/21 14:55	95-47-6	J
Surrogates									
1,4-Dichlorobenzene-d4 (IS)	97.2	%	60.0-140		1	03/27/21 14:55	03/27/21 14:55	3855-82-1	

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QUALITY CONTROL DATA

Project: City of Bristol Landfill
Pace Project No.: 92529286

QC Batch: 1641534	Analysis Method: TO-15
QC Batch Method: TO-15	Analysis Description: VOA (MS) TO-15
	Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 92529286001

METHOD BLANK: R3635592-3 Matrix: Air
Associated Lab Samples: 92529286001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Acetone	ppbv	ND	1.25	0.584	03/27/21 11:13	
Allyl chloride	ppbv	ND	0.200	0.114	03/27/21 11:13	
Benzene	ppbv	ND	0.200	0.0715	03/27/21 11:13	
Benzyl chloride	ppbv	ND	0.200	0.0598	03/27/21 11:13	
Bromodichloromethane	ppbv	ND	0.200	0.0702	03/27/21 11:13	
Bromoform	ppbv	ND	0.600	0.0732	03/27/21 11:13	
Bromomethane	ppbv	ND	0.200	0.0982	03/27/21 11:13	
1,3-Butadiene	ppbv	ND	2.00	0.104	03/27/21 11:13	
Carbon disulfide	ppbv	ND	0.200	0.102	03/27/21 11:13	
Carbon tetrachloride	ppbv	ND	0.200	0.0732	03/27/21 11:13	
Chlorobenzene	ppbv	ND	0.200	0.0832	03/27/21 11:13	
Chloroethane	ppbv	ND	0.200	0.0996	03/27/21 11:13	
Chloroform	ppbv	ND	0.200	0.0717	03/27/21 11:13	
Chloromethane	ppbv	ND	0.200	0.103	03/27/21 11:13	
2-Chlorotoluene	ppbv	ND	0.200	0.0828	03/27/21 11:13	
Cyclohexane	ppbv	ND	0.200	0.0753	03/27/21 11:13	
Dibromochloromethane	ppbv	ND	0.200	0.0727	03/27/21 11:13	
1,2-Dibromoethane (EDB)	ppbv	ND	0.200	0.0721	03/27/21 11:13	
1,2-Dichlorobenzene	ppbv	ND	0.200	0.128	03/27/21 11:13	
1,3-Dichlorobenzene	ppbv	ND	0.200	0.182	03/27/21 11:13	
1,4-Dichlorobenzene	ppbv	ND	0.200	0.0557	03/27/21 11:13	
1,2-Dichloroethane	ppbv	ND	0.200	0.0700	03/27/21 11:13	
1,1-Dichloroethane	ppbv	ND	0.200	0.0723	03/27/21 11:13	
1,1-Dichloroethene	ppbv	ND	0.200	0.0762	03/27/21 11:13	
cis-1,2-Dichloroethene	ppbv	ND	0.200	0.0784	03/27/21 11:13	
trans-1,2-Dichloroethene	ppbv	ND	0.200	0.0673	03/27/21 11:13	
1,2-Dichloropropane	ppbv	ND	0.200	0.0760	03/27/21 11:13	
cis-1,3-Dichloropropene	ppbv	ND	0.200	0.0689	03/27/21 11:13	
trans-1,3-Dichloropropene	ppbv	ND	0.200	0.0728	03/27/21 11:13	
1,4-Dioxane (p-Dioxane)	ppbv	ND	0.200	0.0833	03/27/21 11:13	
Ethylbenzene	ppbv	ND	0.200	0.0835	03/27/21 11:13	
4-Ethyltoluene	ppbv	ND	0.200	0.0783	03/27/21 11:13	
Trichlorofluoromethane	ppbv	ND	0.200	0.0819	03/27/21 11:13	
Dichlorodifluoromethane	ppbv	ND	0.200	0.137	03/27/21 11:13	
1,1,2-Trichlorotrifluoroethane	ppbv	ND	0.200	0.0793	03/27/21 11:13	
Dichlorotetrafluoroethane	ppbv	ND	0.200	0.0890	03/27/21 11:13	
n-Heptane	ppbv	ND	0.200	0.104	03/27/21 11:13	
Hexachloro-1,3-butadiene	ppbv	ND	0.630	0.105	03/27/21 11:13	
n-Hexane	ppbv	ND	0.630	0.206	03/27/21 11:13	
Isopropylbenzene (Cumene)	ppbv	ND	0.200	0.0777	03/27/21 11:13	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: City of Bristol Landfill
Pace Project No.: 92529286

METHOD BLANK: R3635592-3

Matrix: Air

Associated Lab Samples: 92529286001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylene Chloride	ppbv	ND	0.200	0.0979	03/27/21 11:13	
2-Hexanone	ppbv	ND	1.25	0.133	03/27/21 11:13	
2-Butanone (MEK)	ppbv	ND	1.25	0.0814	03/27/21 11:13	
4-Methyl-2-pentanone (MIBK)	ppbv	ND	1.25	0.0765	03/27/21 11:13	
Methyl methacrylate	ppbv	ND	0.200	0.0876	03/27/21 11:13	
Methyl-tert-butyl ether	ppbv	ND	0.200	0.0647	03/27/21 11:13	
Naphthalene	ppbv	ND	0.630	0.350	03/27/21 11:13	
2-Propanol	ppbv	ND	1.25	0.264	03/27/21 11:13	
Propylene	ppbv	ND	0.400	0.0932	03/27/21 11:13	
Styrene	ppbv	ND	0.200	0.0788	03/27/21 11:13	
1,1,2,2-Tetrachloroethane	ppbv	ND	0.200	0.0743	03/27/21 11:13	
Tetrachloroethene	ppbv	ND	0.200	0.0814	03/27/21 11:13	
Tetrahydrofuran	ppbv	ND	0.200	0.0734	03/27/21 11:13	
Toluene	ppbv	ND	0.500	0.0870	03/27/21 11:13	
1,2,4-Trichlorobenzene	ppbv	ND	0.630	0.148	03/27/21 11:13	
1,1,1-Trichloroethane	ppbv	ND	0.200	0.0736	03/27/21 11:13	
1,1,2-Trichloroethane	ppbv	ND	0.200	0.0775	03/27/21 11:13	
Trichloroethene	ppbv	ND	0.200	0.0680	03/27/21 11:13	
1,2,4-Trimethylbenzene	ppbv	ND	0.200	0.0764	03/27/21 11:13	
1,3,5-Trimethylbenzene	ppbv	ND	0.200	0.0779	03/27/21 11:13	
2,2,4-Trimethylpentane	ppbv	ND	0.200	0.133	03/27/21 11:13	
Vinyl chloride	ppbv	ND	0.200	0.0949	03/27/21 11:13	
Vinyl bromide	ppbv	ND	0.200	0.0852	03/27/21 11:13	
Vinyl acetate	ppbv	ND	0.200	0.116	03/27/21 11:13	
m&p-Xylene	ppbv	ND	0.400	0.135	03/27/21 11:13	
o-Xylene	ppbv	ND	0.200	0.0828	03/27/21 11:13	
Ethanol	ppbv	ND	0.630	0.265	03/27/21 11:13	
1,4-Dichlorobenzene-d4 (IS)	%	95	60.0-140		03/27/21 11:13	

LABORATORY CONTROL SAMPLE & LCSD: R3635592-1

R3635592-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethanol	ppbv	3.75	4.10	4.16	109	111	55.0-148	1.45	25	
Propylene	ppbv	3.75	3.88	3.90	103	104	64.0-144	0.514	25	
Dichlorodifluoromethane	ppbv	3.75	4.39	4.35	117	116	64.0-139	0.915	25	
Dichlorotetrafluoroethane	ppbv	3.75	4.30	4.27	115	114	70.0-130	0.700	25	
Chloromethane	ppbv	3.75	4.23	4.22	113	113	70.0-130	0.237	25	
Vinyl chloride	ppbv	3.75	4.43	4.35	118	116	70.0-130	1.82	25	
1,3-Butadiene	ppbv	3.75	4.25	4.13	113	110	70.0-130	2.86	25	
Bromomethane	ppbv	3.75	4.27	4.25	114	113	70.0-130	0.469	25	
Chloroethane	ppbv	3.75	4.25	4.27	113	114	70.0-130	0.469	25	
Trichlorofluoromethane	ppbv	3.75	4.25	4.25	113	113	70.0-130	0.00	25	
1,1,2-Trichlorotrifluoroethane	ppbv	3.75	4.28	4.23	114	113	70.0-130	1.18	25	
1,1-Dichloroethene	ppbv	3.75	4.22	4.17	113	111	70.0-130	1.19	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: City of Bristol Landfill
Pace Project No.: 92529286

LABORATORY CONTROL SAMPLE & LCSD: R3635592-1			R3635592-2							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1-Dichloroethane	ppbv	3.75	4.18	4.18	111	111	70.0-130	0.00	25	
Acetone	ppbv	3.75	4.25	4.17	113	111	70.0-130	1.90	25	
2-Propanol	ppbv	3.75	4.17	4.04	111	108	70.0-139	3.17	25	
Carbon disulfide	ppbv	3.75	4.18	4.18	111	111	70.0-130	0.00	25	
Methylene Chloride	ppbv	3.75	4.19	4.11	112	110	70.0-130	1.93	25	
Methyl-tert-butyl ether	ppbv	3.75	4.16	4.11	111	110	70.0-130	1.21	25	
trans-1,2-Dichloroethene	ppbv	3.75	4.17	4.13	111	110	70.0-130	0.964	25	
n-Hexane	ppbv	3.75	4.18	4.12	111	110	70.0-130	1.45	25	
Vinyl acetate	ppbv	3.75	4.14	4.03	110	107	70.0-130	2.69	25	
2-Butanone (MEK)	ppbv	3.75	4.30	4.30	115	115	70.0-130	0.00	25	
cis-1,2-Dichloroethene	ppbv	3.75	4.20	4.13	112	110	70.0-130	1.68	25	
Chloroform	ppbv	3.75	4.20	4.13	112	110	70.0-130	1.68	25	
Cyclohexane	ppbv	3.75	4.26	4.20	114	112	70.0-130	1.42	25	
1,1,1-Trichloroethane	ppbv	3.75	4.24	4.20	113	112	70.0-130	0.948	25	
Carbon tetrachloride	ppbv	3.75	4.25	4.22	113	113	70.0-130	0.708	25	
Benzene	ppbv	3.75	4.21	4.18	112	111	70.0-130	0.715	25	
1,2-Dichloroethane	ppbv	3.75	4.20	4.16	112	111	70.0-130	0.957	25	
n-Heptane	ppbv	3.75	4.04	4.08	108	109	70.0-130	0.985	25	
Trichloroethene	ppbv	3.75	4.17	4.17	111	111	70.0-130	0.00	25	
1,2-Dichloropropane	ppbv	3.75	4.15	4.11	111	110	70.0-130	0.969	25	
1,4-Dioxane (p-Dioxane)	ppbv	3.75	4.06	4.05	108	108	70.0-140	0.247	25	
Bromodichloromethane	ppbv	3.75	4.21	4.18	112	111	70.0-130	0.715	25	
cis-1,3-Dichloropropene	ppbv	3.75	4.20	4.19	112	112	70.0-130	0.238	25	
4-Methyl-2-pentanone (MIBK)	ppbv	3.75	4.16	4.16	111	111	70.0-139	0.00	25	
Toluene	ppbv	3.75	4.24	4.22	113	113	70.0-130	0.473	25	
trans-1,3-Dichloropropene	ppbv	3.75	4.25	4.18	113	111	70.0-130	1.66	25	
1,1,2-Trichloroethane	ppbv	3.75	4.16	4.23	111	113	70.0-130	1.67	25	
Tetrachloroethene	ppbv	3.75	4.24	4.24	113	113	70.0-130	0.00	25	
2-Hexanone	ppbv	3.75	4.29	4.27	114	114	70.0-149	0.467	25	
Dibromochloromethane	ppbv	3.75	4.26	4.26	114	114	70.0-130	0.00	25	
1,2-Dibromoethane (EDB)	ppbv	3.75	4.33	4.27	115	114	70.0-130	1.40	25	
Chlorobenzene	ppbv	3.75	4.27	4.25	114	113	70.0-130	0.469	25	
Ethylbenzene	ppbv	3.75	4.29	4.28	114	114	70.0-130	0.233	25	
m&p-Xylene	ppbv	7.50	8.51	8.47	113	113	70.0-130	0.471	25	
o-Xylene	ppbv	3.75	4.16	4.14	111	110	70.0-130	0.482	25	
Styrene	ppbv	3.75	4.27	4.27	114	114	70.0-130	0.00	25	
Bromoform	ppbv	3.75	4.27	4.27	114	114	70.0-130	0.00	25	
1,1,2,2-Tetrachloroethane	ppbv	3.75	4.24	4.22	113	113	70.0-130	0.473	25	
4-Ethyltoluene	ppbv	3.75	4.35	4.30	116	115	70.0-130	1.16	25	
1,3,5-Trimethylbenzene	ppbv	3.75	4.28	4.28	114	114	70.0-130	0.00	25	
1,2,4-Trimethylbenzene	ppbv	3.75	4.28	4.27	114	114	70.0-130	0.234	25	
1,3-Dichlorobenzene	ppbv	3.75	4.35	4.34	116	116	70.0-130	0.230	25	
1,4-Dichlorobenzene	ppbv	3.75	4.46	4.43	119	118	70.0-130	0.675	25	
Benzyl chloride	ppbv	3.75	4.50	4.44	120	118	70.0-152	1.34	25	
1,2-Dichlorobenzene	ppbv	3.75	4.34	4.31	116	115	70.0-130	0.694	25	
1,2,4-Trichlorobenzene	ppbv	3.75	4.31	4.26	115	114	70.0-160	1.17	25	
Hexachloro-1,3-butadiene	ppbv	3.75	4.63	4.62	123	123	70.0-151	0.216	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: City of Bristol Landfill

Pace Project No.: 92529286

LABORATORY CONTROL SAMPLE & LCSD: R3635592-1			R3635592-2							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Naphthalene	ppbv	3.75	4.78	4.80	127	128	70.0-159	0.418	25	
Allyl chloride	ppbv	3.75	4.29	4.07	114	109	70.0-130	5.26	25	
2-Chlorotoluene	ppbv	3.75	4.28	4.27	114	114	70.0-130	0.234	25	
Methyl methacrylate	ppbv	3.75	4.37	4.28	117	114	70.0-130	2.08	25	
Tetrahydrofuran	ppbv	3.75	4.13	4.03	110	107	70.0-137	2.45	25	
2,2,4-Trimethylpentane	ppbv	3.75	4.16	4.10	111	109	70.0-130	1.45	25	
Vinyl bromide	ppbv	3.75	4.21	4.13	112	110	70.0-130	1.92	25	
Isopropylbenzene (Cumene)	ppbv	3.75	4.23	4.20	113	112	70.0-130	0.712	25	
1,4-Dichlorobenzene-d4 (IS)	%				98.5	98.2	60.0-140			

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: City of Bristol Landfill
Pace Project No.: 92529286

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

J Analyte detected below the reporting limit, therefore result is an estimate. This qualifier is also used for all TICs.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: City of Bristol Landfill

Pace Project No.: 92529286

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92529286001	March Comp	TO-15	1641534	TO-15	1641534

REPORT OF LABORATORY ANALYSIS

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