

July 06, 2021

Sam Hess
Bristol Solid Waste Management Facility
2125 Shakesville Rd
Bristol, VA 24201

RE: Project: City of Bristol
Pace Project No.: 92546378

Dear Sam Hess:

Enclosed are the analytical results for sample(s) received by the laboratory on June 24, 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

Pace Project No.: 92546378

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 #: LAO00356

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

Vermont Dept. of Health: ID# VT-2006

Virginia Certification #: VT2006

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

Pace Project No.: 92546378

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92546378001	24 Hour Sample	Air	06/22/21 10:21	06/24/21 08:30

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SAMPLE ANALYTE COUNT

Project: City of Bristol

Pace Project No.: 92546378

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92546378001	24 Hour Sample	TO-15	DAH	69	PAN

PAN = Pace National - Mt. Juliet

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: City of Bristol

Pace Project No.: 92546378

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92546378001	24 Hour Sample					
TO-15	Acetone	10.4	ug/m3	2.97	06/28/21 22:28	
TO-15	Benzene	7.16	ug/m3	0.639	06/28/21 22:28	
TO-15	Chloromethane	1.53	ug/m3	0.413	06/28/21 22:28	
TO-15	Ethanol	26.0	ug/m3	2.36	06/28/21 22:28	
TO-15	Ethylbenzene	1.73	ug/m3	0.867	06/28/21 22:28	
TO-15	4-Ethyltoluene	2.39	ug/m3	0.982	06/28/21 22:28	
TO-15	Trichlorofluoromethane	1.34	ug/m3	1.12	06/28/21 22:28	
TO-15	Dichlorodifluoromethane	2.67	ug/m3	0.989	06/28/21 22:28	
TO-15	n-Hexane	3.34	ug/m3	2.22	06/28/21 22:28	
TO-15	Methylene Chloride	0.879	ug/m3	0.694	06/28/21 22:28	
TO-15	Naphthalene	4.27	ug/m3	3.30	06/28/21 22:28	
TO-15	2-Propanol	5.56	ug/m3	3.07	06/28/21 22:28	
TO-15	Toluene	5.54	ug/m3	1.88	06/28/21 22:28	
TO-15	1,2,4-Trimethylbenzene	3.07	ug/m3	0.982	06/28/21 22:28	
TO-15	1,3,5-Trimethylbenzene	1.24	ug/m3	0.982	06/28/21 22:28	
TO-15	2,2,4-Trimethylpentane	14.6	ug/m3	0.934	06/28/21 22:28	
TO-15	m&p-Xylene	5.29	ug/m3	1.73	06/28/21 22:28	
TO-15	o-Xylene	2.24	ug/m3	0.867	06/28/21 22:28	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: City of Bristol

Pace Project No.: 92546378

Method: TO-15

Description: VOA (MS) TO-15

Client: Draper Aden - Virginia

Date: July 06, 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
Pace Project No.: 92546378

Sample: 24 Hour Sample		Lab ID: 92546378001		Collected: 06/22/21 10:21		Received: 06/24/21 08:30		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							
Gasoline Range Organics	ND	ug/m3	826	39.70	1	06/28/21 22:28	06/28/21 22:28	8006-61-9	
Acetone	10.4	ug/m3	2.97	0.5840	1	06/28/21 22:28	06/28/21 22:28	67-64-1	
Allyl chloride	ND	ug/m3	0.626	0.1140	1	06/28/21 22:28	06/28/21 22:28	107-05-1	
Benzene	7.16	ug/m3	0.639	0.0715	1	06/28/21 22:28	06/28/21 22:28	71-43-2	
Benzyl chloride	ND	ug/m3	1.04	0.0598	1	06/28/21 22:28	06/28/21 22:28	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.0702	1	06/28/21 22:28	06/28/21 22:28	75-27-4	
Bromoform	ND	ug/m3	6.21	0.0732	1	06/28/21 22:28	06/28/21 22:28	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.0982	1	06/28/21 22:28	06/28/21 22:28	74-83-9	
1,3-Butadiene	ND	ug/m3	4.43	0.1040	1	06/28/21 22:28	06/28/21 22:28	106-99-0	
Carbon disulfide	ND	ug/m3	0.622	0.1020	1	06/28/21 22:28	06/28/21 22:28	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.26	0.0732	1	06/28/21 22:28	06/28/21 22:28	56-23-5	
Chlorobenzene	ND	ug/m3	0.924	0.0832	1	06/28/21 22:28	06/28/21 22:28	108-90-7	
Chloroethane	ND	ug/m3	0.528	0.0996	1	06/28/21 22:28	06/28/21 22:28	75-00-3	
Chloroform	ND	ug/m3	0.973	0.0717	1	06/28/21 22:28	06/28/21 22:28	67-66-3	
Chloromethane	1.53	ug/m3	0.413	0.1030	1	06/28/21 22:28	06/28/21 22:28	74-87-3	
2-Chlorotoluene	ND	ug/m3	1.03	0.0828	1	06/28/21 22:28	06/28/21 22:28	95-49-8	
Cyclohexane	ND	ug/m3	0.689	0.0753	1	06/28/21 22:28	06/28/21 22:28	110-82-7	
Dibromochloromethane	ND	ug/m3	1.70	0.0727	1	06/28/21 22:28	06/28/21 22:28	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.0721	1	06/28/21 22:28	06/28/21 22:28	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.1280	1	06/28/21 22:28	06/28/21 22:28	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	0.1820	1	06/28/21 22:28	06/28/21 22:28	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	1.20	0.0557	1	06/28/21 22:28	06/28/21 22:28	106-46-7	
1,2-Dichloroethane	ND	ug/m3	0.810	0.07	1	06/28/21 22:28	06/28/21 22:28	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.0723	1	06/28/21 22:28	06/28/21 22:28	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.0762	1	06/28/21 22:28	06/28/21 22:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.793	0.0784	1	06/28/21 22:28	06/28/21 22:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.793	0.0673	1	06/28/21 22:28	06/28/21 22:28	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.924	0.0760	1	06/28/21 22:28	06/28/21 22:28	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.0689	1	06/28/21 22:28	06/28/21 22:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.0728	1	06/28/21 22:28	06/28/21 22:28	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	0.721	0.0833	1	06/28/21 22:28	06/28/21 22:28	123-91-1	
Ethanol	26.0	ug/m3	2.36	0.2650	1	06/28/21 22:28	06/28/21 22:28	64-17-5	
Ethylbenzene	1.73	ug/m3	0.867	0.0835	1	06/28/21 22:28	06/28/21 22:28	100-41-4	
4-Ethyltoluene	2.39	ug/m3	0.982	0.0783	1	06/28/21 22:28	06/28/21 22:28	622-96-8	
Trichlorofluoromethane	1.34	ug/m3	1.12	0.0819	1	06/28/21 22:28	06/28/21 22:28	75-69-4	
Dichlorodifluoromethane	2.67	ug/m3	0.989	0.1370	1	06/28/21 22:28	06/28/21 22:28	75-71-8	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.53	0.0793	1	06/28/21 22:28	06/28/21 22:28	76-13-1	
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.0890	1	06/28/21 22:28	06/28/21 22:28	76-14-2	
n-Heptane	ND	ug/m3	0.818	0.1040	1	06/28/21 22:28	06/28/21 22:28	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	0.1050	1	06/28/21 22:28	06/28/21 22:28	87-68-3	
n-Hexane	3.34	ug/m3	2.22	0.2060	1	06/28/21 22:28	06/28/21 22:28	110-54-3	
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.0777	1	06/28/21 22:28	06/28/21 22:28	98-82-8	
Methylene Chloride	0.879	ug/m3	0.694	0.0979	1	06/28/21 22:28	06/28/21 22:28	75-09-2	
2-Hexanone	ND	ug/m3	5.11	0.1330	1	06/28/21 22:28	06/28/21 22:28	591-78-6	
2-Butanone (MEK)	ND	ug/m3	3.69	0.0814	1	06/28/21 22:28	06/28/21 22:28	78-93-3	

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ANALYTICAL RESULTS

Project: City of Bristol
Pace Project No.: 92546378

Sample: 24 Hour Sample		Lab ID: 92546378001		Collected: 06/22/21 10:21		Received: 06/24/21 08:30		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							
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	5.12	0.0765	1	06/28/21 22:28	06/28/21 22:28	108-10-1	
Methyl methacrylate	ND	ug/m3	0.819	0.0876	1	06/28/21 22:28	06/28/21 22:28	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.0647	1	06/28/21 22:28	06/28/21 22:28	1634-04-4	
Naphthalene	4.27	ug/m3	3.30	0.35	1	06/28/21 22:28	06/28/21 22:28	91-20-3	
2-Propanol	5.56	ug/m3	3.07	0.2640	1	06/28/21 22:28	06/28/21 22:28	67-63-0	
Propylene	ND	ug/m3	2.15	0.0932	1	06/28/21 22:28	06/28/21 22:28	115-07-1	
Styrene	ND	ug/m3	0.851	0.0788	1	06/28/21 22:28	06/28/21 22:28	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.0743	1	06/28/21 22:28	06/28/21 22:28	79-34-5	
Tetrachloroethene	ND	ug/m3	1.36	0.0814	1	06/28/21 22:28	06/28/21 22:28	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.590	0.0734	1	06/28/21 22:28	06/28/21 22:28	109-99-9	
Toluene	5.54	ug/m3	1.88	0.0870	1	06/28/21 22:28	06/28/21 22:28	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	0.1480	1	06/28/21 22:28	06/28/21 22:28	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.0736	1	06/28/21 22:28	06/28/21 22:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.0775	1	06/28/21 22:28	06/28/21 22:28	79-00-5	
Trichloroethene	ND	ug/m3	1.07	0.0680	1	06/28/21 22:28	06/28/21 22:28	79-01-6	
1,2,4-Trimethylbenzene	3.07	ug/m3	0.982	0.0764	1	06/28/21 22:28	06/28/21 22:28	95-63-6	
1,3,5-Trimethylbenzene	1.24	ug/m3	0.982	0.0779	1	06/28/21 22:28	06/28/21 22:28	108-67-8	
2,2,4-Trimethylpentane	14.6	ug/m3	0.934	0.1330	1	06/28/21 22:28	06/28/21 22:28	540-84-1	
Vinyl chloride	ND	ug/m3	0.511	0.0949	1	06/28/21 22:28	06/28/21 22:28	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.0852	1	06/28/21 22:28	06/28/21 22:28	593-60-2	
Vinyl acetate	ND	ug/m3	0.704	0.1160	1	06/28/21 22:28	06/28/21 22:28	108-05-4	
m&p-Xylene	5.29	ug/m3	1.73	0.1350	1	06/28/21 22:28	06/28/21 22:28	179601-23-1	
o-Xylene	2.24	ug/m3	0.867	0.0828	1	06/28/21 22:28	06/28/21 22:28	95-47-6	
Surrogates									
1,4-Dichlorobenzene-d4 (IS)	99.0	%	60.0-140		1	06/28/21 22:28	06/28/21 22:28	3855-82-1	

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QUALITY CONTROL DATA

Project: City of Bristol
Pace Project No.: 92546378

QC Batch:	1696469	Analysis Method:	TO-15
QC Batch Method:	TO-15	Analysis Description:	VOA (MS) TO-15
		Laboratory:	Pace National - Mt. Juliet

Associated Lab Samples: 92546378001

METHOD BLANK: R3673209-3 Matrix: Air
Associated Lab Samples: 92546378001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Acetone	ppbv	ND	1.25	0.584	06/28/21 10:58	
Allyl chloride	ppbv	ND	0.200	0.114	06/28/21 10:58	
Benzene	ppbv	ND	0.200	0.0715	06/28/21 10:58	
Benzyl chloride	ppbv	ND	0.200	0.0598	06/28/21 10:58	
Bromodichloromethane	ppbv	ND	0.200	0.0702	06/28/21 10:58	
Bromoform	ppbv	ND	0.600	0.0732	06/28/21 10:58	
Bromomethane	ppbv	ND	0.200	0.0982	06/28/21 10:58	
1,3-Butadiene	ppbv	ND	2.00	0.104	06/28/21 10:58	
Carbon disulfide	ppbv	ND	0.200	0.102	06/28/21 10:58	
Carbon tetrachloride	ppbv	ND	0.200	0.0732	06/28/21 10:58	
Chlorobenzene	ppbv	ND	0.200	0.0832	06/28/21 10:58	
Chloroethane	ppbv	ND	0.200	0.0996	06/28/21 10:58	
Chloroform	ppbv	ND	0.200	0.0717	06/28/21 10:58	
Chloromethane	ppbv	ND	0.200	0.103	06/28/21 10:58	
2-Chlorotoluene	ppbv	ND	0.200	0.0828	06/28/21 10:58	
Cyclohexane	ppbv	ND	0.200	0.0753	06/28/21 10:58	
Dibromochloromethane	ppbv	ND	0.200	0.0727	06/28/21 10:58	
1,2-Dibromoethane (EDB)	ppbv	ND	0.200	0.0721	06/28/21 10:58	
1,2-Dichlorobenzene	ppbv	ND	0.200	0.128	06/28/21 10:58	
1,3-Dichlorobenzene	ppbv	ND	0.200	0.182	06/28/21 10:58	
1,4-Dichlorobenzene	ppbv	ND	0.200	0.0557	06/28/21 10:58	
1,2-Dichloroethane	ppbv	ND	0.200	0.0700	06/28/21 10:58	
1,1-Dichloroethane	ppbv	ND	0.200	0.0723	06/28/21 10:58	
1,1-Dichloroethene	ppbv	ND	0.200	0.0762	06/28/21 10:58	
cis-1,2-Dichloroethene	ppbv	ND	0.200	0.0784	06/28/21 10:58	
trans-1,2-Dichloroethene	ppbv	ND	0.200	0.0673	06/28/21 10:58	
1,2-Dichloropropane	ppbv	ND	0.200	0.0760	06/28/21 10:58	
cis-1,3-Dichloropropene	ppbv	ND	0.200	0.0689	06/28/21 10:58	
trans-1,3-Dichloropropene	ppbv	ND	0.200	0.0728	06/28/21 10:58	
1,4-Dioxane (p-Dioxane)	ppbv	ND	0.200	0.0833	06/28/21 10:58	
Ethylbenzene	ppbv	ND	0.200	0.0835	06/28/21 10:58	
4-Ethyltoluene	ppbv	ND	0.200	0.0783	06/28/21 10:58	
Trichlorofluoromethane	ppbv	ND	0.200	0.0819	06/28/21 10:58	
Dichlorodifluoromethane	ppbv	ND	0.200	0.137	06/28/21 10:58	
1,1,2-Trichlorotrifluoroethane	ppbv	ND	0.200	0.0793	06/28/21 10:58	
Dichlorotetrafluoroethane	ppbv	ND	0.200	0.0890	06/28/21 10:58	
n-Heptane	ppbv	ND	0.200	0.104	06/28/21 10:58	
Hexachloro-1,3-butadiene	ppbv	ND	0.630	0.105	06/28/21 10:58	
n-Hexane	ppbv	ND	0.630	0.206	06/28/21 10:58	
Isopropylbenzene (Cumene)	ppbv	ND	0.200	0.0777	06/28/21 10:58	

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
Pace Project No.: 92546378

METHOD BLANK: R3673209-3
Associated Lab Samples: 92546378001

Matrix: Air

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylene Chloride	ppbv	ND	0.200	0.0979	06/28/21 10:58	
2-Hexanone	ppbv	ND	1.25	0.133	06/28/21 10:58	
2-Butanone (MEK)	ppbv	ND	1.25	0.0814	06/28/21 10:58	
4-Methyl-2-pentanone (MIBK)	ppbv	ND	1.25	0.0765	06/28/21 10:58	
Methyl methacrylate	ppbv	ND	0.200	0.0876	06/28/21 10:58	
Methyl-tert-butyl ether	ppbv	ND	0.200	0.0647	06/28/21 10:58	
Naphthalene	ppbv	ND	0.630	0.350	06/28/21 10:58	
2-Propanol	ppbv	ND	1.25	0.264	06/28/21 10:58	
Propylene	ppbv	0.201J	1.25	0.0932	06/28/21 10:58	J
Styrene	ppbv	ND	0.200	0.0788	06/28/21 10:58	
1,1,2,2-Tetrachloroethane	ppbv	ND	0.200	0.0743	06/28/21 10:58	
Tetrachloroethene	ppbv	ND	0.200	0.0814	06/28/21 10:58	
Tetrahydrofuran	ppbv	ND	0.200	0.0734	06/28/21 10:58	
Toluene	ppbv	ND	0.500	0.0870	06/28/21 10:58	
1,2,4-Trichlorobenzene	ppbv	ND	0.630	0.148	06/28/21 10:58	
1,1,1-Trichloroethane	ppbv	ND	0.200	0.0736	06/28/21 10:58	
1,1,2-Trichloroethane	ppbv	ND	0.200	0.0775	06/28/21 10:58	
Trichloroethene	ppbv	ND	0.200	0.0680	06/28/21 10:58	
1,2,4-Trimethylbenzene	ppbv	ND	0.200	0.0764	06/28/21 10:58	
1,3,5-Trimethylbenzene	ppbv	ND	0.200	0.0779	06/28/21 10:58	
2,2,4-Trimethylpentane	ppbv	ND	0.200	0.133	06/28/21 10:58	
Vinyl chloride	ppbv	ND	0.200	0.0949	06/28/21 10:58	
Vinyl bromide	ppbv	ND	0.200	0.0852	06/28/21 10:58	
Vinyl acetate	ppbv	ND	0.200	0.116	06/28/21 10:58	
m&p-Xylene	ppbv	ND	0.400	0.135	06/28/21 10:58	
o-Xylene	ppbv	ND	0.200	0.0828	06/28/21 10:58	
Ethanol	ppbv	0.320J	1.25	0.265	06/28/21 10:58	J
Gasoline Range Organics	ppbv	ND	200	39.7	06/28/21 10:58	
1,4-Dichlorobenzene-d4 (IS)	%	96.5	60.0-140		06/28/21 10:58	

LABORATORY CONTROL SAMPLE & LCSD: R3673209-1

R3673209-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethanol	ppbv	3.75	4.30	4.08	115	109	55.0-148	5.25	25	
Propylene	ppbv	3.75	4.06	4.03	108	107	64.0-144	0.742	25	
Dichlorodifluoromethane	ppbv	3.75	3.85	3.77	103	101	64.0-139	2.10	25	
Dichlorotetrafluoroethane	ppbv	3.75	4.07	3.96	109	106	70.0-130	2.74	25	
Chloromethane	ppbv	3.75	4.17	4.01	111	107	70.0-130	3.91	25	
Vinyl chloride	ppbv	3.75	4.09	4.06	109	108	70.0-130	0.736	25	
1,3-Butadiene	ppbv	3.75	3.88	3.83	103	102	70.0-130	1.30	25	
Bromomethane	ppbv	3.75	4.11	4.01	110	107	70.0-130	2.46	25	
Chloroethane	ppbv	3.75	4.11	4.10	110	109	70.0-130	0.244	25	
Trichlorofluoromethane	ppbv	3.75	3.80	3.79	101	101	70.0-130	0.264	25	
1,1,2-Trichlorotrifluoroethane	ppbv	3.75	4.19	4.04	112	108	70.0-130	3.65	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: City of Bristol

Pace Project No.: 92546378

LABORATORY CONTROL SAMPLE & LCSD: R3673209-1

R3673209-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1-Dichloroethene	ppbv	3.75	4.11	4.05	110	108	70.0-130	1.47	25	
1,1-Dichloroethane	ppbv	3.75	4.26	4.14	114	110	70.0-130	2.86	25	
Acetone	ppbv	3.75	3.88	3.82	103	102	70.0-130	1.56	25	
2-Propanol	ppbv	3.75	4.21	4.15	112	111	70.0-139	1.44	25	
Carbon disulfide	ppbv	3.75	4.32	4.20	115	112	70.0-130	2.82	25	
Methylene Chloride	ppbv	3.75	4.14	4.13	110	110	70.0-130	0.242	25	
Methyl-tert-butyl ether	ppbv	3.75	4.33	4.28	115	114	70.0-130	1.16	25	
trans-1,2-Dichloroethene	ppbv	3.75	4.22	4.15	113	111	70.0-130	1.67	25	
n-Hexane	ppbv	3.75	4.63	4.49	123	120	70.0-130	3.07	25	
Vinyl acetate	ppbv	3.75	4.17	4.04	111	108	70.0-130	3.17	25	
2-Butanone (MEK)	ppbv	3.75	4.40	4.38	117	117	70.0-130	0.456	25	
cis-1,2-Dichloroethene	ppbv	3.75	4.24	4.22	113	113	70.0-130	0.473	25	
Chloroform	ppbv	3.75	4.01	4.00	107	107	70.0-130	0.250	25	
Cyclohexane	ppbv	3.75	4.44	4.35	118	116	70.0-130	2.05	25	
1,1,1-Trichloroethane	ppbv	3.75	3.93	3.84	105	102	70.0-130	2.32	25	
Carbon tetrachloride	ppbv	3.75	3.78	3.74	101	99.7	70.0-130	1.06	25	
Benzene	ppbv	3.75	4.15	4.06	111	108	70.0-130	2.19	25	
1,2-Dichloroethane	ppbv	3.75	3.73	3.78	99.5	101	70.0-130	1.33	25	
n-Heptane	ppbv	3.75	4.39	4.31	117	115	70.0-130	1.84	25	
Trichloroethene	ppbv	3.75	4.02	3.91	107	104	70.0-130	2.77	25	
1,2-Dichloropropane	ppbv	3.75	4.37	4.28	117	114	70.0-130	2.08	25	
1,4-Dioxane (p-Dioxane)	ppbv	3.75	4.13	4.09	110	109	70.0-140	0.973	25	
Bromodichloromethane	ppbv	3.75	3.91	3.83	104	102	70.0-130	2.07	25	
cis-1,3-Dichloropropene	ppbv	3.75	4.32	4.36	115	116	70.0-130	0.922	25	
4-Methyl-2-pentanone (MIBK)	ppbv	3.75	4.31	4.26	115	114	70.0-139	1.17	25	
Toluene	ppbv	3.75	4.16	4.17	111	111	70.0-130	0.240	25	
trans-1,3-Dichloropropene	ppbv	3.75	4.19	3.98	112	106	70.0-130	5.14	25	
1,1,2-Trichloroethane	ppbv	3.75	4.13	4.05	110	108	70.0-130	1.96	25	
Tetrachloroethene	ppbv	3.75	3.94	3.92	105	105	70.0-130	0.509	25	
2-Hexanone	ppbv	3.75	4.20	4.11	112	110	70.0-149	2.17	25	
Dibromochloromethane	ppbv	3.75	3.91	3.83	104	102	70.0-130	2.07	25	
1,2-Dibromoethane (EDB)	ppbv	3.75	4.12	4.07	110	109	70.0-130	1.22	25	
Chlorobenzene	ppbv	3.75	4.07	4.00	109	107	70.0-130	1.73	25	
Ethylbenzene	ppbv	3.75	4.16	4.15	111	111	70.0-130	0.241	25	
m&p-Xylene	ppbv	7.50	8.64	8.49	115	113	70.0-130	1.75	25	
o-Xylene	ppbv	3.75	4.36	4.25	116	113	70.0-130	2.56	25	
Styrene	ppbv	3.75	4.36	4.28	116	114	70.0-130	1.85	25	
Bromoform	ppbv	3.75	3.76	3.77	100	101	70.0-130	0.266	25	
1,1,2,2-Tetrachloroethane	ppbv	3.75	4.22	4.18	113	111	70.0-130	0.952	25	
4-Ethyltoluene	ppbv	3.75	4.33	4.25	115	113	70.0-130	1.86	25	
1,3,5-Trimethylbenzene	ppbv	3.75	4.23	4.13	113	110	70.0-130	2.39	25	
1,2,4-Trimethylbenzene	ppbv	3.75	4.34	4.34	116	116	70.0-130	0.00	25	
1,3-Dichlorobenzene	ppbv	3.75	4.17	4.16	111	111	70.0-130	0.240	25	
1,4-Dichlorobenzene	ppbv	3.75	4.19	4.12	112	110	70.0-130	1.68	25	
Benzyl chloride	ppbv	3.75	5.29	5.26	141	140	70.0-152	0.569	25	
1,2-Dichlorobenzene	ppbv	3.75	4.19	4.11	112	110	70.0-130	1.93	25	
1,2,4-Trichlorobenzene	ppbv	3.75	3.78	3.76	101	100	70.0-160	0.531	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: City of Bristol

Pace Project No.: 92546378

LABORATORY CONTROL SAMPLE & LCSD: R3673209-1			R3673209-2								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
Hexachloro-1,3-butadiene	ppbv	3.75	3.68	3.64	98.1	97.1	70.0-151	1.09	25		
Naphthalene	ppbv	3.75	3.46	3.46	92.3	92.3	70.0-159	0.00	25		
Gasoline Range Organics	ppbv	203	223	220	110	108	70.0-130	1.35	25		
Allyl chloride	ppbv	3.75	4.38	4.25	117	113	70.0-130	3.01	25		
2-Chlorotoluene	ppbv	3.75	4.12	4.04	110	108	70.0-130	1.96	25		
Methyl methacrylate	ppbv	3.75	4.27	4.16	114	111	70.0-130	2.61	25		
Tetrahydrofuran	ppbv	3.75	4.52	4.47	121	119	70.0-137	1.11	25		
2,2,4-Trimethylpentane	ppbv	3.75	4.57	4.49	122	120	70.0-130	1.77	25		
Vinyl bromide	ppbv	3.75	4.11	4.06	110	108	70.0-130	1.22	25		
Isopropylbenzene (Cumene)	ppbv	3.75	4.43	4.34	118	116	70.0-130	2.05	25		
1,4-Dichlorobenzene-d4 (IS)	%				98.7	98.3	60.0-140				

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QUALIFIERS

Project: City of Bristol
Pace Project No.: 92546378

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

Pace Project No.: 92546378

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92546378001	24 Hour Sample	TO-15	1696469	TO-15	1696469

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