

January 27, 2022

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

RE: Project: CITY OF BRISTOL
Pace Project No.: 92584309

Dear Sam Hess:

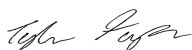
Enclosed are the analytical results for sample(s) received by the laboratory on January 25, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise 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,



Tyler Forney
tyler.forney@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Ms. Carrie Blankenship, Draper Aden Associates
Ms. Janet Frazier, Draper Aden Associates
Zac Mitchell, City of Bristol, Virginia
Kathy Olsen, Draper Aden Associates



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CITY OF BRISTOL

Pace Project No.: 92584309

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

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

Pace Project No.: 92584309

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92584309001	JANUARY 24-HR	Air	01/23/22 08:03	01/25/22 09:15

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SAMPLE ANALYTE COUNT

Project: CITY OF BRISTOL

Pace Project No.: 92584309

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92584309001	JANUARY 24-HR	TO-15	DAH	68	PAN

PAN = Pace National - Mt. Juliet

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: CITY OF BRISTOL

Pace Project No.: 92584309

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92584309001	JANUARY 24-HR					
TO-15	Acetone	15.5	ug/m3	2.97	01/26/22 00:02	
TO-15	Benzene	21.7	ug/m3	0.639	01/26/22 00:02	
TO-15	Chloromethane	1.13	ug/m3	0.413	01/26/22 00:02	
TO-15	Ethanol	10.2	ug/m3	2.36	01/26/22 00:02	
TO-15	Ethylbenzene	2.85	ug/m3	0.867	01/26/22 00:02	
TO-15	Trichlorofluoromethane	1.28	ug/m3	1.12	01/26/22 00:02	
TO-15	Dichlorodifluoromethane	2.15	ug/m3	0.989	01/26/22 00:02	
TO-15	2-Butanone (MEK)	4.31	ug/m3	3.69	01/26/22 00:02	
TO-15	Tetrahydrofuran	2.48	ug/m3	0.590	01/26/22 00:02	
TO-15	Toluene	3.29	ug/m3	1.88	01/26/22 00:02	
TO-15	m&p-Xylene	2.26	ug/m3	1.73	01/26/22 00:02	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CITY OF BRISTOL

Pace Project No.: 92584309

Method: TO-15

Description: VOA (MS) TO-15

Client: Draper Aden - Virginia

Date: January 27, 2022

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.: 92584309

Sample: JANUARY 24-HR Lab ID: 92584309001 Collected: 01/23/22 08:03 Received: 01/25/22 09:15 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	15.5	ug/m3	2.97	0.5840	1	01/26/22 00:02	01/26/22 00:02	67-64-1	
Allyl chloride	ND	ug/m3	0.626	0.1140	1	01/26/22 00:02	01/26/22 00:02	107-05-1	
Benzene	21.7	ug/m3	0.639	0.0715	1	01/26/22 00:02	01/26/22 00:02	71-43-2	
Benzyl chloride	ND	ug/m3	1.04	0.0598	1	01/26/22 00:02	01/26/22 00:02	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.0702	1	01/26/22 00:02	01/26/22 00:02	75-27-4	
Bromoform	ND	ug/m3	6.21	0.0732	1	01/26/22 00:02	01/26/22 00:02	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.0982	1	01/26/22 00:02	01/26/22 00:02	74-83-9	
1,3-Butadiene	ND	ug/m3	4.43	0.1040	1	01/26/22 00:02	01/26/22 00:02	106-99-0	
Carbon disulfide	ND	ug/m3	0.622	0.1020	1	01/26/22 00:02	01/26/22 00:02	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.26	0.0732	1	01/26/22 00:02	01/26/22 00:02	56-23-5	
Chlorobenzene	ND	ug/m3	0.924	0.0832	1	01/26/22 00:02	01/26/22 00:02	108-90-7	
Chloroethane	ND	ug/m3	0.528	0.0996	1	01/26/22 00:02	01/26/22 00:02	75-00-3	
Chloroform	ND	ug/m3	0.973	0.0717	1	01/26/22 00:02	01/26/22 00:02	67-66-3	
Chloromethane	1.13	ug/m3	0.413	0.1030	1	01/26/22 00:02	01/26/22 00:02	74-87-3	
2-Chlorotoluene	ND	ug/m3	1.03	0.0828	1	01/26/22 00:02	01/26/22 00:02	95-49-8	
Cyclohexane	ND	ug/m3	0.689	0.0753	1	01/26/22 00:02	01/26/22 00:02	110-82-7	
Dibromochloromethane	ND	ug/m3	1.70	0.0727	1	01/26/22 00:02	01/26/22 00:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.0721	1	01/26/22 00:02	01/26/22 00:02	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.1280	1	01/26/22 00:02	01/26/22 00:02	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	0.1820	1	01/26/22 00:02	01/26/22 00:02	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	1.20	0.0557	1	01/26/22 00:02	01/26/22 00:02	106-46-7	
1,2-Dichloroethane	ND	ug/m3	0.810	0.07	1	01/26/22 00:02	01/26/22 00:02	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.0723	1	01/26/22 00:02	01/26/22 00:02	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.0762	1	01/26/22 00:02	01/26/22 00:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.793	0.0784	1	01/26/22 00:02	01/26/22 00:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.793	0.0673	1	01/26/22 00:02	01/26/22 00:02	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.924	0.0760	1	01/26/22 00:02	01/26/22 00:02	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.0689	1	01/26/22 00:02	01/26/22 00:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.0728	1	01/26/22 00:02	01/26/22 00:02	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	0.721	0.0833	1	01/26/22 00:02	01/26/22 00:02	123-91-1	
Ethanol	10.2	ug/m3	2.36	0.2650	1	01/26/22 00:02	01/26/22 00:02	64-17-5	
Ethylbenzene	2.85	ug/m3	0.867	0.0835	1	01/26/22 00:02	01/26/22 00:02	100-41-4	
4-Ethyltoluene	ND	ug/m3	0.982	0.0783	1	01/26/22 00:02	01/26/22 00:02	622-96-8	
Trichlorofluoromethane	1.28	ug/m3	1.12	0.0819	1	01/26/22 00:02	01/26/22 00:02	75-69-4	
Dichlorodifluoromethane	2.15	ug/m3	0.989	0.1370	1	01/26/22 00:02	01/26/22 00:02	75-71-8	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.53	0.0793	1	01/26/22 00:02	01/26/22 00:02	76-13-1	
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.0890	1	01/26/22 00:02	01/26/22 00:02	76-14-2	
n-Heptane	ND	ug/m3	0.818	0.1040	1	01/26/22 00:02	01/26/22 00:02	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	0.1050	1	01/26/22 00:02	01/26/22 00:02	87-68-3	
n-Hexane	ND	ug/m3	2.22	0.2060	1	01/26/22 00:02	01/26/22 00:02	110-54-3	
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.0777	1	01/26/22 00:02	01/26/22 00:02	98-82-8	
Methylene Chloride	ND	ug/m3	0.694	0.0979	1	01/26/22 00:02	01/26/22 00:02	75-09-2	
2-Hexanone	ND	ug/m3	5.11	0.1330	1	01/26/22 00:02	01/26/22 00:02	591-78-6	
2-Butanone (MEK)	4.31	ug/m3	3.69	0.0814	1	01/26/22 00:02	01/26/22 00:02	78-93-3	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	5.12	0.0765	1	01/26/22 00:02	01/26/22 00:02	108-10-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CITY OF BRISTOL

Pace Project No.: 92584309

Sample: JANUARY 24-HR		Lab ID: 92584309001		Collected: 01/23/22 08:03		Received: 01/25/22 09:15		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	0.0876	1	01/26/22 00:02	01/26/22 00:02	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.0647	1	01/26/22 00:02	01/26/22 00:02	1634-04-4	
Naphthalene	ND	ug/m3	3.30	0.35	1	01/26/22 00:02	01/26/22 00:02	91-20-3	
2-Propanol	ND	ug/m3	3.07	0.2640	1	01/26/22 00:02	01/26/22 00:02	67-63-0	
Propylene	ND	ug/m3	2.15	0.0932	1	01/26/22 00:02	01/26/22 00:02	115-07-1	
Styrene	ND	ug/m3	0.851	0.0788	1	01/26/22 00:02	01/26/22 00:02	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.0743	1	01/26/22 00:02	01/26/22 00:02	79-34-5	
Tetrachloroethene	ND	ug/m3	1.36	0.0814	1	01/26/22 00:02	01/26/22 00:02	127-18-4	
Tetrahydrofuran	2.48	ug/m3	0.590	0.0734	1	01/26/22 00:02	01/26/22 00:02	109-99-9	
Toluene	3.29	ug/m3	1.88	0.0870	1	01/26/22 00:02	01/26/22 00:02	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	0.1480	1	01/26/22 00:02	01/26/22 00:02	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.0736	1	01/26/22 00:02	01/26/22 00:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.0775	1	01/26/22 00:02	01/26/22 00:02	79-00-5	
Trichloroethene	ND	ug/m3	1.07	0.0680	1	01/26/22 00:02	01/26/22 00:02	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	0.982	0.0764	1	01/26/22 00:02	01/26/22 00:02	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	0.982	0.0779	1	01/26/22 00:02	01/26/22 00:02	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	0.934	0.1330	1	01/26/22 00:02	01/26/22 00:02	540-84-1	
Vinyl chloride	ND	ug/m3	0.511	0.0949	1	01/26/22 00:02	01/26/22 00:02	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.0852	1	01/26/22 00:02	01/26/22 00:02	593-60-2	
Vinyl acetate	ND	ug/m3	0.704	0.1160	1	01/26/22 00:02	01/26/22 00:02	108-05-4	
m&p-Xylene	2.26	ug/m3	1.73	0.1350	1	01/26/22 00:02	01/26/22 00:02	179601-23-1	
o-Xylene	ND	ug/m3	0.867	0.0828	1	01/26/22 00:02	01/26/22 00:02	95-47-6	
Surrogates									
1,4-Dichlorobenzene-d4 (IS)	101	%	60.0-140		1	01/26/22 00:02	01/26/22 00:02	3855-82-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CITY OF BRISTOL
Pace Project No.: 92584309

QC Batch:	1807743	Analysis Method:	TO-15
QC Batch Method:	TO-15	Analysis Description:	VOA (MS) TO-15
		Laboratory:	Pace National - Mt. Juliet

Associated Lab Samples: 92584309001

METHOD BLANK: R3753598-3 Matrix: Air
Associated Lab Samples: 92584309001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Acetone	ppbv	ND	1.25	0.584	01/25/22 13:54	
Allyl chloride	ppbv	ND	0.200	0.114	01/25/22 13:54	
Benzene	ppbv	ND	0.200	0.0715	01/25/22 13:54	
Benzyl chloride	ppbv	ND	0.200	0.0598	01/25/22 13:54	
Bromodichloromethane	ppbv	ND	0.200	0.0702	01/25/22 13:54	
Bromoform	ppbv	ND	0.600	0.0732	01/25/22 13:54	
Bromomethane	ppbv	ND	0.200	0.0982	01/25/22 13:54	
1,3-Butadiene	ppbv	ND	2.00	0.104	01/25/22 13:54	
Carbon disulfide	ppbv	ND	0.200	0.102	01/25/22 13:54	
Carbon tetrachloride	ppbv	ND	0.200	0.0732	01/25/22 13:54	
Chlorobenzene	ppbv	ND	0.200	0.0832	01/25/22 13:54	
Chloroethane	ppbv	ND	0.200	0.0996	01/25/22 13:54	
Chloroform	ppbv	ND	0.200	0.0717	01/25/22 13:54	
Chloromethane	ppbv	ND	0.200	0.103	01/25/22 13:54	
2-Chlorotoluene	ppbv	ND	0.200	0.0828	01/25/22 13:54	
Cyclohexane	ppbv	ND	0.200	0.0753	01/25/22 13:54	
Dibromochloromethane	ppbv	ND	0.200	0.0727	01/25/22 13:54	
1,2-Dibromoethane (EDB)	ppbv	ND	0.200	0.0721	01/25/22 13:54	
1,2-Dichlorobenzene	ppbv	ND	0.200	0.128	01/25/22 13:54	
1,3-Dichlorobenzene	ppbv	ND	0.200	0.182	01/25/22 13:54	
1,4-Dichlorobenzene	ppbv	ND	0.200	0.0557	01/25/22 13:54	
1,2-Dichloroethane	ppbv	ND	0.200	0.0700	01/25/22 13:54	
1,1-Dichloroethane	ppbv	ND	0.200	0.0723	01/25/22 13:54	
1,1-Dichloroethene	ppbv	ND	0.200	0.0762	01/25/22 13:54	
cis-1,2-Dichloroethene	ppbv	ND	0.200	0.0784	01/25/22 13:54	
trans-1,2-Dichloroethene	ppbv	ND	0.200	0.0673	01/25/22 13:54	
1,2-Dichloropropane	ppbv	ND	0.200	0.0760	01/25/22 13:54	
cis-1,3-Dichloropropene	ppbv	ND	0.200	0.0689	01/25/22 13:54	
trans-1,3-Dichloropropene	ppbv	ND	0.200	0.0728	01/25/22 13:54	
1,4-Dioxane (p-Dioxane)	ppbv	ND	0.200	0.0833	01/25/22 13:54	
Ethylbenzene	ppbv	ND	0.200	0.0835	01/25/22 13:54	
4-Ethyltoluene	ppbv	ND	0.200	0.0783	01/25/22 13:54	
Trichlorofluoromethane	ppbv	ND	0.200	0.0819	01/25/22 13:54	
Dichlorodifluoromethane	ppbv	ND	0.200	0.137	01/25/22 13:54	
1,1,2-Trichlorotrifluoroethane	ppbv	ND	0.200	0.0793	01/25/22 13:54	
Dichlorotetrafluoroethane	ppbv	ND	0.200	0.0890	01/25/22 13:54	
n-Heptane	ppbv	ND	0.200	0.104	01/25/22 13:54	
Hexachloro-1,3-butadiene	ppbv	ND	0.630	0.105	01/25/22 13:54	
n-Hexane	ppbv	ND	0.630	0.206	01/25/22 13:54	
Isopropylbenzene (Cumene)	ppbv	ND	0.200	0.0777	01/25/22 13:54	

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.: 92584309

METHOD BLANK: R3753598-3

Matrix: Air

Associated Lab Samples: 92584309001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylene Chloride	ppbv	ND	0.200	0.0979	01/25/22 13:54	
2-Hexanone	ppbv	ND	1.25	0.133	01/25/22 13:54	
2-Butanone (MEK)	ppbv	ND	1.25	0.0814	01/25/22 13:54	
4-Methyl-2-pentanone (MIBK)	ppbv	ND	1.25	0.0765	01/25/22 13:54	
Methyl methacrylate	ppbv	ND	0.200	0.0876	01/25/22 13:54	
Methyl-tert-butyl ether	ppbv	ND	0.200	0.0647	01/25/22 13:54	
Naphthalene	ppbv	ND	0.630	0.350	01/25/22 13:54	
2-Propanol	ppbv	ND	1.25	0.264	01/25/22 13:54	
Propylene	ppbv	ND	1.25	0.0932	01/25/22 13:54	
Styrene	ppbv	ND	0.200	0.0788	01/25/22 13:54	
1,1,2,2-Tetrachloroethane	ppbv	ND	0.200	0.0743	01/25/22 13:54	
Tetrachloroethene	ppbv	ND	0.200	0.0814	01/25/22 13:54	
Tetrahydrofuran	ppbv	ND	0.200	0.0734	01/25/22 13:54	
Toluene	ppbv	ND	0.500	0.0870	01/25/22 13:54	
1,2,4-Trichlorobenzene	ppbv	ND	0.630	0.148	01/25/22 13:54	
1,1,1-Trichloroethane	ppbv	ND	0.200	0.0736	01/25/22 13:54	
1,1,2-Trichloroethane	ppbv	ND	0.200	0.0775	01/25/22 13:54	
Trichloroethene	ppbv	ND	0.200	0.0680	01/25/22 13:54	
1,2,4-Trimethylbenzene	ppbv	ND	0.200	0.0764	01/25/22 13:54	
1,3,5-Trimethylbenzene	ppbv	ND	0.200	0.0779	01/25/22 13:54	
2,2,4-Trimethylpentane	ppbv	ND	0.200	0.133	01/25/22 13:54	
Vinyl chloride	ppbv	ND	0.200	0.0949	01/25/22 13:54	
Vinyl bromide	ppbv	ND	0.200	0.0852	01/25/22 13:54	
Vinyl acetate	ppbv	ND	0.200	0.116	01/25/22 13:54	
m&p-Xylene	ppbv	ND	0.400	0.135	01/25/22 13:54	
o-Xylene	ppbv	ND	0.200	0.0828	01/25/22 13:54	
Ethanol	ppbv	ND	1.25	0.265	01/25/22 13:54	
1,4-Dichlorobenzene-d4 (IS)	%	91	60.0-140		01/25/22 13:54	

LABORATORY CONTROL SAMPLE & LCSD: R3753598-1

R3753598-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethanol	ppbv	3.75	4.32	4.46	115	119	55.0-148	3.19	25	
Propylene	ppbv	3.75	4.15	4.20	111	112	64.0-144	1.20	25	
Dichlorodifluoromethane	ppbv	3.75	3.91	3.95	104	105	64.0-139	1.02	25	
Dichlorotetrafluoroethane	ppbv	3.75	4.00	4.01	107	107	70.0-130	0.250	25	
Chloromethane	ppbv	3.75	3.82	3.89	102	104	70.0-130	1.82	25	
Vinyl chloride	ppbv	3.75	3.90	4.10	104	109	70.0-130	5.00	25	
1,3-Butadiene	ppbv	3.75	2.82	3.04	75.2	81.1	70.0-130	7.51	25	
Bromomethane	ppbv	3.75	4.06	4.24	108	113	70.0-130	4.34	25	
Chloroethane	ppbv	3.75	3.98	4.01	106	107	70.0-130	0.751	25	
Trichlorofluoromethane	ppbv	3.75	4.02	4.12	107	110	70.0-130	2.46	25	
1,1,2-Trichlorotrifluoroethane	ppbv	3.75	3.66	3.82	97.6	102	70.0-130	4.28	25	
1,1-Dichloroethene	ppbv	3.75	3.71	3.89	98.9	104	70.0-130	4.74	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CITY OF BRISTOL

Pace Project No.: 92584309

LABORATORY CONTROL SAMPLE & LCSD: R3753598-1			R3753598-2							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1-Dichloroethane	ppbv	3.75	3.96	4.04	106	108	70.0-130	2.00	25	
Acetone	ppbv	3.75	3.65	4.32	97.3	115	70.0-130	16.8	25	
2-Propanol	ppbv	3.75	3.93	4.03	105	107	70.0-139	2.51	25	
Carbon disulfide	ppbv	3.75	3.75	3.82	100	102	70.0-130	1.85	25	
Methylene Chloride	ppbv	3.75	3.70	3.78	98.7	101	70.0-130	2.14	25	
Methyl-tert-butyl ether	ppbv	3.75	3.91	4.01	104	107	70.0-130	2.53	25	
trans-1,2-Dichloroethene	ppbv	3.75	3.81	3.92	102	105	70.0-130	2.85	25	
n-Hexane	ppbv	3.75	3.84	3.89	102	104	70.0-130	1.29	25	
Vinyl acetate	ppbv	3.75	3.85	3.97	103	106	70.0-130	3.07	25	
2-Butanone (MEK)	ppbv	3.75	4.06	4.25	108	113	70.0-130	4.57	25	
cis-1,2-Dichloroethene	ppbv	3.75	3.87	4.10	103	109	70.0-130	5.77	25	
Chloroform	ppbv	3.75	3.87	3.98	103	106	70.0-130	2.80	25	
Cyclohexane	ppbv	3.75	3.93	3.92	105	105	70.0-130	0.255	25	
1,1,1-Trichloroethane	ppbv	3.75	3.91	4.03	104	107	70.0-130	3.02	25	
Carbon tetrachloride	ppbv	3.75	3.91	4.03	104	107	70.0-130	3.02	25	
Benzene	ppbv	3.75	3.99	4.01	106	107	70.0-130	0.500	25	
1,2-Dichloroethane	ppbv	3.75	3.98	4.09	106	109	70.0-130	2.73	25	
n-Heptane	ppbv	3.75	4.07	4.08	109	109	70.0-130	0.245	25	
Trichloroethene	ppbv	3.75	4.00	3.99	107	106	70.0-130	0.250	25	
1,2-Dichloropropane	ppbv	3.75	3.90	3.97	104	106	70.0-130	1.78	25	
1,4-Dioxane (p-Dioxane)	ppbv	3.75	3.95	4.05	105	108	70.0-140	2.50	25	
Bromodichloromethane	ppbv	3.75	4.01	4.00	107	107	70.0-130	0.250	25	
cis-1,3-Dichloropropene	ppbv	3.75	4.05	4.18	108	111	70.0-130	3.16	25	
4-Methyl-2-pentanone (MIBK)	ppbv	3.75	3.87	4.00	103	107	70.0-139	3.30	25	
Toluene	ppbv	3.75	3.96	4.05	106	108	70.0-130	2.25	25	
trans-1,3-Dichloropropene	ppbv	3.75	4.19	4.16	112	111	70.0-130	0.719	25	
1,1,2-Trichloroethane	ppbv	3.75	4.04	4.02	108	107	70.0-130	0.496	25	
Tetrachloroethene	ppbv	3.75	3.97	4.00	106	107	70.0-130	0.753	25	
2-Hexanone	ppbv	3.75	4.08	4.00	109	107	70.0-149	1.98	25	
Dibromochloromethane	ppbv	3.75	4.07	4.09	109	109	70.0-130	0.490	25	
1,2-Dibromoethane (EDB)	ppbv	3.75	4.08	4.11	109	110	70.0-130	0.733	25	
Chlorobenzene	ppbv	3.75	4.10	4.09	109	109	70.0-130	0.244	25	
Ethylbenzene	ppbv	3.75	4.06	4.13	108	110	70.0-130	1.71	25	
m&p-Xylene	ppbv	7.50	8.03	7.99	107	107	70.0-130	0.499	25	
o-Xylene	ppbv	3.75	4.06	4.16	108	111	70.0-130	2.43	25	
Styrene	ppbv	3.75	4.22	4.33	113	115	70.0-130	2.57	25	
Bromoform	ppbv	3.75	4.18	4.22	111	113	70.0-130	0.952	25	
1,1,2,2-Tetrachloroethane	ppbv	3.75	4.07	4.09	109	109	70.0-130	0.490	25	
4-Ethyltoluene	ppbv	3.75	4.27	4.34	114	116	70.0-130	1.63	25	
1,3,5-Trimethylbenzene	ppbv	3.75	4.21	4.27	112	114	70.0-130	1.42	25	
1,2,4-Trimethylbenzene	ppbv	3.75	4.10	4.15	109	111	70.0-130	1.21	25	
1,3-Dichlorobenzene	ppbv	3.75	4.40	4.45	117	119	70.0-130	1.13	25	
1,4-Dichlorobenzene	ppbv	3.75	4.72	4.58	126	122	70.0-130	3.01	25	
Benzyl chloride	ppbv	3.75	4.85	5.02	129	134	70.0-152	3.44	25	
1,2-Dichlorobenzene	ppbv	3.75	4.26	4.31	114	115	70.0-130	1.17	25	
1,2,4-Trichlorobenzene	ppbv	3.75	3.92	4.00	105	107	70.0-160	2.02	25	
Hexachloro-1,3-butadiene	ppbv	3.75	3.82	3.91	102	104	70.0-151	2.33	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CITY OF BRISTOL

Pace Project No.: 92584309

LABORATORY CONTROL SAMPLE & LCSD: R3753598-1			R3753598-2							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Naphthalene	ppbv	3.75	3.92	3.93	105	105	70.0-159	0.255	25	
Allyl chloride	ppbv	3.75	3.78	3.83	101	102	70.0-130	1.31	25	
2-Chlorotoluene	ppbv	3.75	4.16	4.24	111	113	70.0-130	1.90	25	
Methyl methacrylate	ppbv	3.75	4.11	4.12	110	110	70.0-130	0.243	25	
Tetrahydrofuran	ppbv	3.75	3.95	4.05	105	108	70.0-137	2.50	25	
2,2,4-Trimethylpentane	ppbv	3.75	3.87	3.99	103	106	70.0-130	3.05	25	
Vinyl bromide	ppbv	3.75	4.18	4.21	111	112	70.0-130	0.715	25	
Isopropylbenzene (Cumene)	ppbv	3.75	4.13	4.15	110	111	70.0-130	0.483	25	
1,4-Dichlorobenzene-d4 (IS)	%				104	104	60.0-140			

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QUALIFIERS

Project: CITY OF BRISTOL

Pace Project No.: 92584309

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.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CITY OF BRISTOL

Pace Project No.: 92584309

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92584309001	JANUARY 24-HR	TO-15	1807743	TO-15	1807743

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