

**ATTACHMENT 3
SAMPLING RESULTS
NOVEMBER 2023 (24-HOUR SAMPLE)**





November 22, 2023

David Cochran
City of Bristol VA
2655 Valley Dr
Bristol, VA 24201

RE: Project: CITY OF BRISTOL
Pace Project No.: 92699310

Dear David Cochran:

Enclosed are the analytical results for sample(s) received by the laboratory on November 16, 2023. 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,

Sara Poulson
sara.poulson@pacelabs.com
704-977-0964
Project Manager

Enclosures

cc: Karen Culbertson, City of Bristol VA
Jonathan Hayes
Logan Howard, City of Bristol VA
Joey Lamie
Jennifer Robb, City of Bristol VA



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CITY OF BRISTOL

Pace Project No.: 92699310

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.: 92699310

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92699310001	NOVEMBER 24HR	Air	11/15/23 10:55	11/16/23 09:00

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SAMPLE ANALYTE COUNT

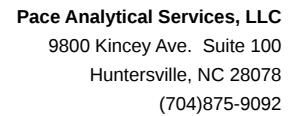
Project: CITY OF BRISTOL
Pace Project No.: 92699310

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92699310001	NOVEMBER 24HR	TO-15	DAH	71	PAN

PAN = Pace National - Mt. Juliet

REPORT OF LABORATORY ANALYSIS

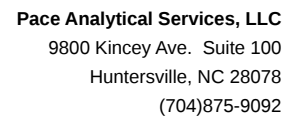
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Project: CITY OF BRISTOL
Pace Project No.: 92699310

The image displays a 4x4 grid of 16 horizontal bar charts. Each chart has a y-axis with 10 categories labeled 'Category 1' through 'Category 10'. The bars are colored in a repeating pattern of blue, orange, green, and red. The data values vary across the charts, with some categories having multiple bars of the same color.

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PROJECT NARRATIVE

Project: CITY OF BRISTOL
Pace Project No.: 92699310

Method: TO-15
Description: VOA (MS) TO-15
Client: City of Bristol VA
Date: November 22, 2023

General Information:

4 samples were 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.

QC Batch: 2173751

B: Analyte was detected in the associated method blank.

- R4002841-3 (Lab ID: R4002841-3)
 - 2-Propanol
 - Ethanol

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.: 92699310

Sample: NOVEMBER 24HR Lab ID: 92699310001 Collected: 11/15/23 10:55 Received: 11/16/23 09:00 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	9.58	ug/m3	2.97	1.39	1	11/18/23 12:47	11/18/23 12:47	67-64-1	
Acetonitrile	ND	ug/m3	8.39	0.395	1	11/18/23 12:47	11/18/23 12:47	75-05-8	
Allyl chloride	ND	ug/m3	0.626	0.357	1	11/18/23 12:47	11/18/23 12:47	107-05-1	
Benzene	1.81	ug/m3	0.639	0.228	1	11/18/23 12:47	11/18/23 12:47	71-43-2	
Benzyl chloride	ND	ug/m3	1.04	0.311	1	11/18/23 12:47	11/18/23 12:47	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.471	1	11/18/23 12:47	11/18/23 12:47	75-27-4	
Bromoform	ND	ug/m3	6.21	0.757	1	11/18/23 12:47	11/18/23 12:47	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.381	1	11/18/23 12:47	11/18/23 12:47	74-83-9	
1,3-Butadiene	ND	ug/m3	4.43	0.230	1	11/18/23 12:47	11/18/23 12:47	106-99-0	
Carbon disulfide	ND	ug/m3	0.622	0.317	1	11/18/23 12:47	11/18/23 12:47	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.26	0.461	1	11/18/23 12:47	11/18/23 12:47	56-23-5	
Chlorobenzene	ND	ug/m3	0.924	0.385	1	11/18/23 12:47	11/18/23 12:47	108-90-7	
Chloroethane	ND	ug/m3	0.528	0.263	1	11/18/23 12:47	11/18/23 12:47	75-00-3	
Chloroform	ND	ug/m3	0.973	0.349	1	11/18/23 12:47	11/18/23 12:47	67-66-3	
Chloromethane	0.843	ug/m3	0.413	0.213	1	11/18/23 12:47	11/18/23 12:47	74-87-3	
2-Chlorotoluene	ND	ug/m3	1.03	0.427	1	11/18/23 12:47	11/18/23 12:47	95-49-8	
Cyclohexane	ND	ug/m3	0.689	0.259	1	11/18/23 12:47	11/18/23 12:47	110-82-7	
Dibromochloromethane	ND	ug/m3	1.70	0.618	1	11/18/23 12:47	11/18/23 12:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.554	1	11/18/23 12:47	11/18/23 12:47	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.770	1	11/18/23 12:47	11/18/23 12:47	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	1.09	1	11/18/23 12:47	11/18/23 12:47	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	1.20	0.335	1	11/18/23 12:47	11/18/23 12:47	106-46-7	
1,2-Dichloroethane	ND	ug/m3	0.810	0.283	1	11/18/23 12:47	11/18/23 12:47	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.290	1	11/18/23 12:47	11/18/23 12:47	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.302	1	11/18/23 12:47	11/18/23 12:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.793	0.311	1	11/18/23 12:47	11/18/23 12:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.793	0.267	1	11/18/23 12:47	11/18/23 12:47	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.924	0.351	1	11/18/23 12:47	11/18/23 12:47	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.313	1	11/18/23 12:47	11/18/23 12:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.331	1	11/18/23 12:47	11/18/23 12:47	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	2.27	0.300	1	11/18/23 12:47	11/18/23 12:47	123-91-1	
Ethanol	26.8	ug/m3	4.71	0.500	1	11/18/23 12:47	11/18/23 12:47	64-17-5	
Ethylbenzene	0.481J	ug/m3	0.867	0.362	1	11/18/23 12:47	11/18/23 12:47	100-41-4	J
Ethyl acetate	ND	ug/m3	2.27	0.360	1	11/18/23 12:47	11/18/23 12:47	141-78-6	
4-Ethyltoluene	ND	ug/m3	0.982	0.384	1	11/18/23 12:47	11/18/23 12:47	622-96-8	
Trichlorofluoromethane	1.11J	ug/m3	1.12	0.460	1	11/18/23 12:47	11/18/23 12:47	75-69-4	J
Dichlorodifluoromethane	2.09	ug/m3	0.989	0.678	1	11/18/23 12:47	11/18/23 12:47	75-71-8	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.53	0.608	1	11/18/23 12:47	11/18/23 12:47	76-13-1	
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.622	1	11/18/23 12:47	11/18/23 12:47	76-14-2	
n-Heptane	ND	ug/m3	0.818	0.425	1	11/18/23 12:47	11/18/23 12:47	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	1.12	1	11/18/23 12:47	11/18/23 12:47	87-68-3	
n-Hexane	ND	ug/m3	2.22	0.726	1	11/18/23 12:47	11/18/23 12:47	110-54-3	
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.382	1	11/18/23 12:47	11/18/23 12:47	98-82-8	
Methylene Chloride	1.96	ug/m3	0.694	0.340	1	11/18/23 12:47	11/18/23 12:47	75-09-2	
2-Hexanone	ND	ug/m3	5.11	0.544	1	11/18/23 12:47	11/18/23 12:47	591-78-6	

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ANALYTICAL RESULTS

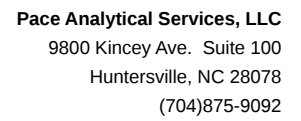
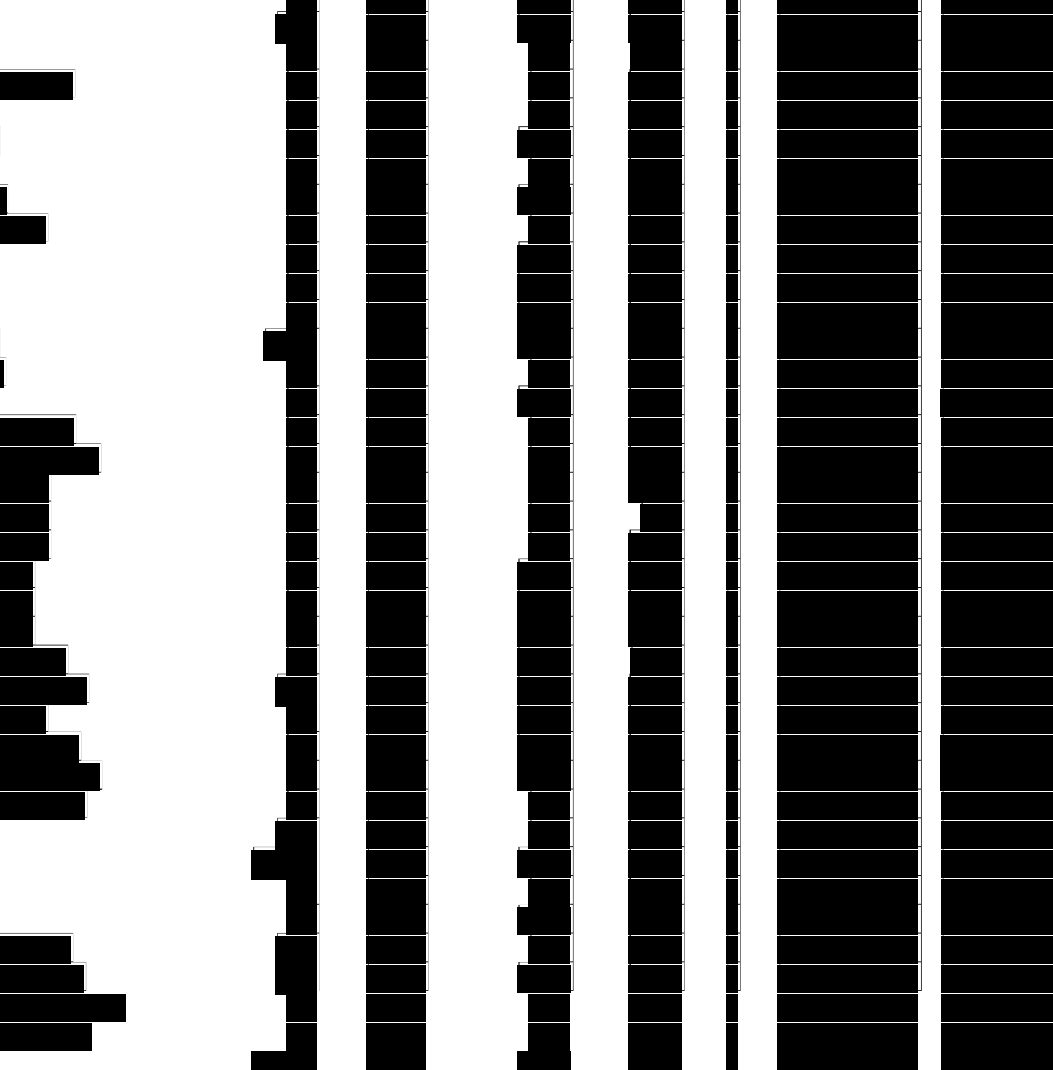
Project: CITY OF BRISTOL

Pace Project No.: 92699310

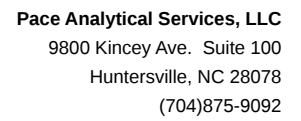
Sample: NOVEMBER 24HR Lab ID: 92699310001 Collected: 11/15/23 10:55 Received: 11/16/23 09:00 Matrix: Air									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15 Analytical Method: TO-15 Preparation Method: TO-15 Pace National - Mt. Juliet									
2-Butanone (MEK)	1.37J	ug/m3	3.69	0.240	1	11/18/23 12:47	11/18/23 12:47	78-93-3	J
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	5.12	0.313	1	11/18/23 12:47	11/18/23 12:47	108-10-1	
Methyl methacrylate	ND	ug/m3	0.819	0.359	1	11/18/23 12:47	11/18/23 12:47	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.233	1	11/18/23 12:47	11/18/23 12:47	1634-04-4	
Naphthalene	ND	ug/m3	3.30	1.83	1	11/18/23 12:47	11/18/23 12:47	91-20-3	
2-Propanol	7.89	ug/m3	3.07	0.649	1	11/18/23 12:47	11/18/23 12:47	67-63-0	B
Propylene	ND	ug/m3	2.15	0.160	1	11/18/23 12:47	11/18/23 12:47	115-07-1	
Styrene	ND	ug/m3	0.851	0.335	1	11/18/23 12:47	11/18/23 12:47	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.511	1	11/18/23 12:47	11/18/23 12:47	79-34-5	
Tetrachloroethene	ND	ug/m3	1.36	0.553	1	11/18/23 12:47	11/18/23 12:47	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.590	0.216	1	11/18/23 12:47	11/18/23 12:47	109-99-9	
Toluene	1.45J	ug/m3	1.88	0.328	1	11/18/23 12:47	11/18/23 12:47	108-88-3	J
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	1.10	1	11/18/23 12:47	11/18/23 12:47	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.400	1	11/18/23 12:47	11/18/23 12:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.422	1	11/18/23 12:47	11/18/23 12:47	79-00-5	
Trichloroethene	ND	ug/m3	1.07	0.364	1	11/18/23 12:47	11/18/23 12:47	79-01-6	
1,2,4-Trimethylbenzene	0.406J	ug/m3	0.982	0.375	1	11/18/23 12:47	11/18/23 12:47	95-63-6	J
1,3,5-Trimethylbenzene	ND	ug/m3	0.982	0.382	1	11/18/23 12:47	11/18/23 12:47	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	0.934	0.621	1	11/18/23 12:47	11/18/23 12:47	540-84-1	
Vinyl chloride	ND	ug/m3	0.511	0.243	1	11/18/23 12:47	11/18/23 12:47	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.373	1	11/18/23 12:47	11/18/23 12:47	593-60-2	
Vinyl acetate	ND	ug/m3	2.22	0.408	1	11/18/23 12:47	11/18/23 12:47	108-05-4	
m&p-Xylene	1.09J	ug/m3	1.73	0.585	1	11/18/23 12:47	11/18/23 12:47	179601-23-1	J
o-Xylene	0.397J	ug/m3	0.867	0.359	1	11/18/23 12:47	11/18/23 12:47	95-47-6	J
Xylene (Total)	1.49J	ug/m3	2.61	0.586	1	11/18/23 12:47	11/18/23 12:47	1330-20-7	J
Surrogates									
4-Bromofluorobenzene (S)	95.5	%	60.0-140		1	11/18/23 12:47	11/18/23 12:47	460-00-4	

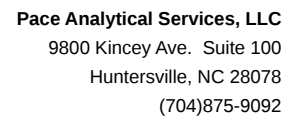
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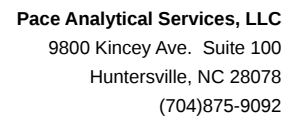
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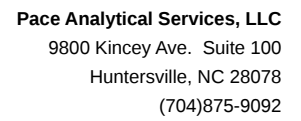
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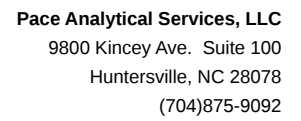
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QUALITY CONTROL DATA

Project: CITY OF BRISTOL
Pace Project No.: 92699310

QC Batch: 2173751 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: VOA (MS) TO-15
Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 92699310001, 92699310002, 92699310003, 92699310004

METHOD BLANK: R4002841-3 Matrix: Air
Associated Lab Samples: 92699310001, 92699310002, 92699310003, 92699310004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Acetone	ug/m3	ND	2.97	1.39	11/18/23 08:20	
Acetonitrile	ug/m3	ND	8.39	0.395	11/18/23 08:20	
Allyl chloride	ug/m3	ND	0.626	0.357	11/18/23 08:20	
Benzene	ug/m3	ND	0.639	0.228	11/18/23 08:20	
Benzyl chloride	ug/m3	ND	1.04	0.311	11/18/23 08:20	
Bromodichloromethane	ug/m3	ND	1.34	0.471	11/18/23 08:20	
Bromoform	ug/m3	ND	6.21	0.757	11/18/23 08:20	
Bromomethane	ug/m3	ND	0.776	0.381	11/18/23 08:20	
1,3-Butadiene	ug/m3	ND	4.43	0.230	11/18/23 08:20	
Carbon disulfide	ug/m3	ND	0.622	0.317	11/18/23 08:20	
Carbon tetrachloride	ug/m3	ND	1.26	0.461	11/18/23 08:20	
Chlorobenzene	ug/m3	ND	0.924	0.385	11/18/23 08:20	
Chloroethane	ug/m3	ND	0.528	0.263	11/18/23 08:20	
Chloroform	ug/m3	ND	0.973	0.349	11/18/23 08:20	
Chloromethane	ug/m3	ND	0.413	0.213	11/18/23 08:20	
2-Chlorotoluene	ug/m3	ND	1.03	0.427	11/18/23 08:20	
Cyclohexane	ug/m3	ND	0.689	0.259	11/18/23 08:20	
Dibromochloromethane	ug/m3	ND	1.70	0.618	11/18/23 08:20	
1,2-Dibromoethane (EDB)	ug/m3	ND	1.54	0.554	11/18/23 08:20	
1,2-Dichlorobenzene	ug/m3	ND	1.20	0.770	11/18/23 08:20	
1,3-Dichlorobenzene	ug/m3	ND	1.20	1.09	11/18/23 08:20	
1,4-Dichlorobenzene	ug/m3	ND	1.20	0.335	11/18/23 08:20	
1,2-Dichloroethane	ug/m3	ND	0.810	0.283	11/18/23 08:20	
1,1-Dichloroethane	ug/m3	ND	0.802	0.290	11/18/23 08:20	
1,1-Dichloroethene	ug/m3	ND	0.793	0.302	11/18/23 08:20	
cis-1,2-Dichloroethene	ug/m3	ND	0.793	0.311	11/18/23 08:20	
trans-1,2-Dichloroethene	ug/m3	ND	0.793	0.267	11/18/23 08:20	
1,2-Dichloropropane	ug/m3	ND	0.924	0.351	11/18/23 08:20	
cis-1,3-Dichloropropene	ug/m3	ND	0.908	0.313	11/18/23 08:20	
trans-1,3-Dichloropropene	ug/m3	ND	0.908	0.331	11/18/23 08:20	
1,4-Dioxane (p-Dioxane)	ug/m3	ND	2.27	0.300	11/18/23 08:20	
Ethanol	ug/m3	1.89J	4.71	0.500	11/18/23 08:20	J
Ethylbenzene	ug/m3	ND	0.867	0.362	11/18/23 08:20	
Ethyl acetate	ug/m3	ND	2.27	0.360	11/18/23 08:20	
4-Ethyltoluene	ug/m3	ND	0.982	0.384	11/18/23 08:20	
Trichlorofluoromethane	ug/m3	ND	1.12	0.460	11/18/23 08:20	
Dichlorodifluoromethane	ug/m3	ND	0.989	0.678	11/18/23 08:20	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	1.53	0.608	11/18/23 08:20	
Dichlorotetrafluoroethane	ug/m3	ND	1.40	0.622	11/18/23 08:20	
n-Heptane	ug/m3	ND	0.818	0.425	11/18/23 08:20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CITY OF BRISTOL
Pace Project No.: 92699310

METHOD BLANK: R4002841-3 Matrix: Air
Associated Lab Samples: 92699310001, 92699310002, 92699310003, 92699310004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/m3	ND	6.73	1.12	11/18/23 08:20	
n-Hexane	ug/m3	ND	2.22	0.726	11/18/23 08:20	
Isopropylbenzene (Cumene)	ug/m3	ND	0.983	0.382	11/18/23 08:20	
Methylene Chloride	ug/m3	ND	0.694	0.340	11/18/23 08:20	
2-Hexanone	ug/m3	ND	5.11	0.544	11/18/23 08:20	
2-Butanone (MEK)	ug/m3	ND	3.69	0.240	11/18/23 08:20	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	5.12	0.313	11/18/23 08:20	
Methyl methacrylate	ug/m3	ND	0.819	0.359	11/18/23 08:20	
Methyl-tert-butyl ether	ug/m3	ND	0.721	0.233	11/18/23 08:20	
Naphthalene	ug/m3	ND	3.30	1.83	11/18/23 08:20	
2-Propanol	ug/m3	1.96J	3.07	0.649	11/18/23 08:20	J
Propylene	ug/m3	ND	2.15	0.160	11/18/23 08:20	
Styrene	ug/m3	ND	0.851	0.335	11/18/23 08:20	
1,1,2,2-Tetrachloroethane	ug/m3	ND	1.37	0.511	11/18/23 08:20	
Tetrachloroethene	ug/m3	ND	1.36	0.553	11/18/23 08:20	
Tetrahydrofuran	ug/m3	ND	0.590	0.216	11/18/23 08:20	
Toluene	ug/m3	ND	1.88	0.328	11/18/23 08:20	
1,2,4-Trichlorobenzene	ug/m3	ND	4.66	1.10	11/18/23 08:20	
1,1,1-Trichloroethane	ug/m3	ND	1.09	0.400	11/18/23 08:20	
1,1,2-Trichloroethane	ug/m3	ND	1.09	0.422	11/18/23 08:20	
Trichloroethene	ug/m3	ND	1.07	0.364	11/18/23 08:20	
1,2,4-Trimethylbenzene	ug/m3	ND	0.982	0.375	11/18/23 08:20	
1,3,5-Trimethylbenzene	ug/m3	ND	0.982	0.382	11/18/23 08:20	
2,2,4-Trimethylpentane	ug/m3	ND	0.934	0.621	11/18/23 08:20	
Vinyl chloride	ug/m3	ND	0.511	0.243	11/18/23 08:20	
Vinyl bromide	ug/m3	ND	0.875	0.373	11/18/23 08:20	
Vinyl acetate	ug/m3	ND	2.22	0.408	11/18/23 08:20	
m&p-Xylene	ug/m3	ND	1.73	0.585	11/18/23 08:20	
o-Xylene	ug/m3	ND	0.867	0.359	11/18/23 08:20	
Xylene (Total)	ug/m3	ND	2.61	0.586	11/18/23 08:20	
4-Bromofluorobenzene (S)	%	94.8	60.0-140		11/18/23 08:20	

LABORATORY CONTROL SAMPLE & LCSD: R4002841-1

		R4002841-2								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Acetone	ug/m3	8.91	8.67	8.67	97.3	97.3	70.0-130	0.00	25	
Acetonitrile	ug/m3	31.6	29.9	30.4	94.7	96.3	70.0-130	1.67	25	
Allyl chloride	ug/m3	11.7	10.5	10.3	89.9	88.0	70.0-130	2.10	25	
Benzene	ug/m3	12.0	10.9	11.3	91.2	94.4	70.0-130	3.45	25	
Benzyl chloride	ug/m3	19.5	17.3	16.7	89.1	85.9	70.0-152	3.66	25	
Bromodichloromethane	ug/m3	25.2	21.9	22.5	86.9	89.6	70.0-130	3.02	25	
Bromoform	ug/m3	38.8	35.9	36.5	92.5	94.1	70.0-130	1.71	25	
Bromomethane	ug/m3	14.6	15.7	15.9	108	109	70.0-130	1.23	25	
1,3-Butadiene	ug/m3	8.30	7.57	7.55	91.2	90.9	70.0-130	0.293	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CITY OF BRISTOL
Pace Project No.: 92699310

LABORATORY CONTROL SAMPLE & LCSD: R4002841-1			R4002841-2							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Carbon disulfide	ug/m3	11.7	12.1	11.9	103	102	70.0-130	1.30	25	
Carbon tetrachloride	ug/m3	23.6	21.5	21.8	91.2	92.3	70.0-130	1.16	25	
Chlorobenzene	ug/m3	17.3	16.5	16.9	95.2	97.3	70.0-130	2.22	25	
Chloroethane	ug/m3	9.89	10.1	10.2	102	103	70.0-130	1.04	25	
Chloroform	ug/m3	18.3	16.9	17.0	92.5	93.3	70.0-130	0.861	25	
Chloromethane	ug/m3	7.75	7.87	7.89	102	102	70.0-130	0.262	25	
2-Chlorotoluene	ug/m3	19.3	18.7	18.9	96.5	97.6	70.0-130	1.10	25	
Cyclohexane	ug/m3	12.9	11.6	11.7	89.9	90.4	70.0-130	0.592	25	
Dibromochloromethane	ug/m3	31.9	29.1	29.9	91.2	93.6	70.0-130	2.60	25	
1,2-Dibromoethane (EDB)	ug/m3	28.8	28.2	28.6	97.9	99.2	70.0-130	1.35	25	
1,2-Dichlorobenzene	ug/m3	22.5	24.0	24.7	106	109	70.0-130	2.72	25	
1,3-Dichlorobenzene	ug/m3	22.5	24.6	24.7	109	110	70.0-130	0.488	25	
1,4-Dichlorobenzene	ug/m3	22.5	25.0	25.0	111	111	70.0-130	0.00	25	
1,2-Dichloroethane	ug/m3	15.2	13.6	14.3	89.9	94.4	70.0-130	4.92	25	
1,1-Dichloroethane	ug/m3	15.0	13.1	13.3	87.5	88.3	70.0-130	0.910	25	
1,1-Dichloroethene	ug/m3	14.9	14.6	14.5	98.4	97.9	70.0-130	0.543	25	
cis-1,2-Dichloroethene	ug/m3	14.9	13.1	13.1	88.0	88.3	70.0-130	0.303	25	
trans-1,2-Dichloroethene	ug/m3	14.9	14.5	15.0	97.6	101	70.0-130	3.49	25	
1,2-Dichloropropane	ug/m3	17.3	15.1	15.4	87.2	88.8	70.0-130	1.82	25	
cis-1,3-Dichloropropene	ug/m3	17.0	15.1	15.0	88.5	88.0	70.0-130	0.604	25	
trans-1,3-Dichloropropene	ug/m3	17.0	14.7	14.9	86.1	87.7	70.0-130	1.84	25	
1,4-Dioxane (p-Dioxane)	ug/m3	13.5	13.7	14.3	102	106	70.0-140	4.11	25	
Ethanol	ug/m3	7.07	7.75	7.81	110	110	55.0-148	0.727	25	
Ethylbenzene	ug/m3	16.3	15.7	15.8	96.5	97.3	70.0-130	0.825	25	
Ethyl acetate	ug/m3	13.5	11.3	11.3	84.0	84.0	70.0-130	0.00	25	
4-Ethyltoluene	ug/m3	18.4	18.6	18.7	101	102	70.0-130	0.788	25	
Trichlorofluoromethane	ug/m3	21.1	21.5	21.5	102	102	70.0-130	0.00	25	
Dichlorodifluoromethane	ug/m3	18.5	19.6	19.7	106	106	64.0-139	0.504	25	
1,1,2-Trichlorotrifluoroethane	ug/m3	28.7	31.5	31.7	110	110	70.0-130	0.485	25	
Dichlorotetrafluoroethane	ug/m3	26.2	28.5	28.4	109	108	70.0-130	0.491	25	
n-Heptane	ug/m3	15.3	12.6	12.9	82.1	84.3	70.0-130	2.56	25	
Hexachloro-1,3-butadiene	ug/m3	40.0	43.8	42.7	109	107	70.0-151	2.47	25	
n-Hexane	ug/m3	13.2	11.4	11.5	86.1	86.7	70.0-130	0.617	25	
Isopropylbenzene (Cumene)	ug/m3	18.4	18.0	18.2	97.6	98.7	70.0-130	1.09	25	
Methylene Chloride	ug/m3	13.0	12.3	12.2	94.7	93.9	70.0-130	0.849	25	
2-Hexanone	ug/m3	15.3	14.9	14.7	97.1	95.7	70.0-149	1.38	25	
2-Butanone (MEK)	ug/m3	11.1	9.79	9.70	88.5	87.7	70.0-130	0.908	25	
4-Methyl-2-pentanone (MIBK)	ug/m3	15.4	11.5	11.8	74.7	76.8	70.0-139	2.82	25	
Methyl methacrylate	ug/m3	15.4	13.2	13.4	85.9	87.5	70.0-130	1.85	25	
Methyl-tert-butyl ether	ug/m3	13.5	11.7	11.5	86.9	85.1	70.0-130	2.17	25	
Naphthalene	ug/m3	19.6	21.2	20.2	108	103	70.0-159	4.80	25	
2-Propanol	ug/m3	9.22	9.14	9.17	99.2	99.5	70.0-139	0.268	25	
Propylene	ug/m3	6.46	5.18	5.03	80.3	77.9	64.0-144	3.04	25	
Styrene	ug/m3	16.0	15.7	15.7	98.4	98.7	70.0-130	0.271	25	
1,1,2,2-Tetrachloroethane	ug/m3	25.8	25.4	26.0	98.7	101	70.0-130	2.40	25	
Tetrachloroethene	ug/m3	25.5	25.8	26.2	101	103	70.0-130	1.57	25	
Tetrahydrofuran	ug/m3	11.1	8.43	8.32	76.3	75.2	70.0-137	1.41	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CITY OF BRISTOL

Pace Project No.: 92699310

LABORATORY CONTROL SAMPLE & LCSD: R4002841-1			R4002841-2							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Toluene	ug/m3	14.1	13.2	13.4	93.6	95.2	70.0-130	1.69	25	
1,2,4-Trichlorobenzene	ug/m3	27.8	29.8	28.1	107	101	70.0-160	6.14	25	
1,1,1-Trichloroethane	ug/m3	20.4	18.2	18.3	89.1	89.9	70.0-130	0.894	25	
1,1,2-Trichloroethane	ug/m3	20.4	19.2	19.9	94.1	97.3	70.0-130	3.34	25	
Trichloroethene	ug/m3	20.1	18.9	19.6	94.1	97.3	70.0-130	3.34	25	
1,2,4-Trimethylbenzene	ug/m3	18.4	18.7	18.6	101	101	70.0-130	0.264	25	
1,3,5-Trimethylbenzene	ug/m3	18.4	18.4	18.5	100	101	70.0-130	0.532	25	
2,2,4-Trimethylpentane	ug/m3	17.5	14.9	15.2	85.3	86.7	70.0-130	1.55	25	
Vinyl chloride	ug/m3	9.59	9.97	10.1	104	105	70.0-130	1.27	25	
Vinyl bromide	ug/m3	16.4	17.4	17.5	106	107	70.0-130	0.501	25	
Vinyl acetate	ug/m3	13.2	10.6	10.3	80.5	77.9	70.0-130	3.37	25	
m&p-Xylene	ug/m3	32.5	32.2	32.8	98.9	101	70.0-130	1.87	25	
o-Xylene	ug/m3	16.3	16.1	16.2	99.2	99.7	70.0-130	0.536	25	
Xylene (Total)	ug/m3	49.1	48.2	49.1	98.2	100	70.0-130	1.79	25	
4-Bromofluorobenzene (S)	%				97.5	96.9	60.0-140			

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: CITY OF BRISTOL
Pace Project No.: 92699310

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.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.
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.: 92699310

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92699310001	NOVEMBER 24HR	TO-15	2173751	TO-15	2173751

REPORT OF LABORATORY ANALYSIS

Pace® Location Requested (City/State):		Air CHAIN-OF-CUSTODY Analytical Request Document Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields											
Company Name: Pace Analytical - Huntersville, NC		Contact/Report To: Sara Poulson		 Scan QR code for instructions									
Street Address: 9800 Kinney Avenue, Suite 100 Huntersville, NC 28078		Phone #: 704-875-9092											
City, State Zip:		E-Mail: Sara.Poulson@pacelabs.com											
Customer Project #:		Cc E-Mail:											
Project Name: City of Bristol		Invoice to: City of Bristol VA		Field Information									
Site Collection Info/Facility ID (as applicable): PACE-POULSONVA 001		Invoice E-Mail: dlochner@bristolva.org											
Time Zone Collected: [] AK [] PT [] MT [] CT [] ET		Purchase Order # (if applicable):											
Data Deliverables: [] Level II [] Level III [] Level IV [] EQUIS [] Other _____		Regulatory Program (CAA, RCRA, etc.) as applicable: Rush (Pre-approval required): 2 Day 3 day 5 day Other _____ Date Results Requested:		Permit # as applicable: Units for Reporting: ug/m³ PPBV mg/m³ PPMV		Canister Pressure / Vacuum		PUF / FILTER		Analyses Requested		Proj. Manager: 464 • Nancy McLain	
* Matrix Codes (Insert in Matrix box below): Ambient (A), Indoor (I), Soil Vapor (SV), Other (O)						Start Pressure / Vacuum		End Pressure / Vacuum		Duration Rate Volume		AcctNum / Client ID: PACE	
Customer Sample ID		Matrix *		Summa Canister ID		Flow Controller ID		Begin Collection Date Time		End Collection Date Time		Table #:	
November 24th				012691 007097		11/14/18 10:55 AM 11/15/18 10:55 AM		23 6				Profile / Template: T210823	
												Prelog / Bottle Ord. ID: P1029804	
												Sample Comment	
												-d-	
Sample Receipt Checklist COC Seal Present/Intact: Y N Airs Size: 1L 6L 1.4L Bottles arrive intact: X N Tag Color: G W P B Correct bottles used: X N Tubing: Shunt													
6722 1900 3178 T/P#:													
Customer Remarks / Special Conditions / Possible Hazards: For Franklin D Cochran II - City of Bristol - Reporting through Pace-NC						Collected By: Printed Name: Franklin D Cochran II Signature: <i>[Signature]</i>		Additional Instructions from Pace*:					
Relinquished by/Company: (Signature) <i>[Signature]</i>						Received by/Company: (Signature) <i>[Signature]</i>		# Coolers: Thermometer ID: Correction Factor (°C): Obs. Temp. (°C): Corrected Temp. (°C):					
Relinquished by/Company: (Signature)						Received by/Company: (Signature)		Tracking Number: OK					
Relinquished by/Company: (Signature)						Received by/Company: (Signature)		Delivered by: In-Person Courier					
Relinquished by/Company: (Signature)						Received by/Company: (Signature)		FedEX UPS Other					
Relinquished by/Company: (Signature)						Received by/Company: (Signature) <i>[Signature]</i>		Page: of:					