Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

October 25, 2024

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

RE: Project: City of Bristol
Pace Project No.: 92759615

Dear David Cochran:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2024. 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,

Eben Buchanan
eben.buchanan@pacelabs.com
(770)734-4200
Project Manager

Enclosures

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

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CERTIFICATIONS

Project: City of Bristol
Pace Project No.: 92759615

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.: 92759615

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92759615001	**October 24hr**	Air	10/17/24 10:18	10/22/24 09:00

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SAMPLE ANALYTE COUNT

Project: City of Bristol
Pace Project No.: 92759615

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92759615001	**October 24hr**	TO-15	CRT, MNP	72	PAN

PAN = Pace National - Mt. Juliet

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SUMMARY OF DETECTION

Project: City of Bristol
Pace Project No.: 92759615

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92759615001	**October 24hr**					
TO-15	1,4-Dichlorobenzene	1.30	ug/m3	1.20	10/24/24 19:27	
TO-15	2,2,4-Trimethylpentane	0.701J	ug/m3	0.934	10/23/24 00:38	J
TO-15	2-Butanone (MEK)	12.2	ug/m3	3.69	10/23/24 00:38	
TO-15	2-Hexanone	0.892J	ug/m3	5.11	10/23/24 00:38	J
TO-15	2-Propanol	20.5	ug/m3	3.07	10/23/24 00:38	
TO-15	4-Methyl-2-pentanone (MIBK)	0.663J	ug/m3	5.12	10/23/24 00:38	J
TO-15	Acetone	50.1	ug/m3	2.97	10/23/24 00:38	
TO-15	Acetonitrile	13.1	ug/m3	8.39	10/23/24 00:38	
TO-15	Benzene	36.1	ug/m3	0.639	10/23/24 00:38	
TO-15	Carbon disulfide	5.35	ug/m3	1.24	10/23/24 00:38	
TO-15	Chloroethane	1.06	ug/m3	0.528	10/23/24 00:38	
TO-15	Chloroform	2.81	ug/m3	0.973	10/23/24 00:38	
TO-15	Chloromethane	4.81	ug/m3	0.413	10/23/24 00:38	
TO-15	Cyclohexane	0.368J	ug/m3	0.689	10/23/24 00:38	J
TO-15	Dichlorodifluoromethane	2.42	ug/m3	0.989	10/23/24 00:38	
TO-15	Ethanol	144	ug/m3	4.71	10/23/24 00:38	
TO-15	Gasoline	5740	ug/m3	1030	10/23/24 00:38	
TO-15	m&p-Xylene	0.629J	ug/m3	1.73	10/24/24 19:27	J
TO-15	Methyl methacrylate	4.67	ug/m3	0.819	10/23/24 00:38	
TO-15	Methylene Chloride	5.94	ug/m3	0.694	10/23/24 00:38	
TO-15	n-Heptane	0.916	ug/m3	0.818	10/23/24 00:38	
TO-15	Styrene	0.872J	ug/m3	1.70	10/24/24 19:27	J
TO-15	Tetrachloroethene	0.693J	ug/m3	1.36	10/23/24 00:38	J
TO-15	Tetrahydrofuran	1.71	ug/m3	0.590	10/23/24 00:38	
TO-15	Toluene	4.48	ug/m3	1.88	10/23/24 00:38	
TO-15	Trichlorofluoromethane	4.08	ug/m3	1.12	10/23/24 00:38	
TO-15	Vinyl acetate	4.16	ug/m3	2.22	10/23/24 00:38	
TO-15	Vinyl chloride	1.94	ug/m3	0.511	10/23/24 00:38	
TO-15	Xylene (Total)	0.630J	ug/m3	2.61	10/24/24 19:27	J

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: City of Bristol
Pace Project No.: 92759615

Method: **TO-15**
Description: VOA (MS) TO-15
Client: City of Bristol VA
Date: October 25, 2024

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.

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ANALYTICAL RESULTS

Project: City of Bristol
Pace Project No.: 92759615

Sample: October 24hr **Lab ID: 92759615001** Collected: 10/17/24 10:18 Received: 10/22/24 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								
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.400	1	10/23/24 00:38	10/23/24 00:38	71-55-6	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.511	1	10/24/24 19:27	10/24/24 19:27	79-34-5	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.422	1	10/23/24 00:38	10/23/24 00:38	79-00-5	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.53	0.608	1	10/23/24 00:38	10/23/24 00:38	76-13-1	
1,1-Dichloroethane	ND	ug/m3	0.802	0.290	1	10/23/24 00:38	10/23/24 00:38	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.302	1	10/23/24 00:38	10/23/24 00:38	75-35-4	
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	1.10	1	10/24/24 19:27	10/24/24 19:27	120-82-1	
1,2,4-Trimethylbenzene	ND	ug/m3	0.982	0.375	1	10/24/24 19:27	10/24/24 19:27	95-63-6	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.554	1	10/23/24 00:38	10/23/24 00:38	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.770	1	10/24/24 19:27	10/24/24 19:27	95-50-1	
1,2-Dichloroethane	ND	ug/m3	0.810	0.283	1	10/23/24 00:38	10/23/24 00:38	107-06-2	
1,2-Dichloropropane	ND	ug/m3	0.924	0.351	1	10/23/24 00:38	10/23/24 00:38	78-87-5	
1,3,5-Trimethylbenzene	ND	ug/m3	0.982	0.382	1	10/24/24 19:27	10/24/24 19:27	108-67-8	
1,3-Butadiene	ND	ug/m3	4.43	0.230	1	10/23/24 00:38	10/23/24 00:38	106-99-0	
1,3-Dichlorobenzene	ND	ug/m3	1.20	1.09	1	10/24/24 19:27	10/24/24 19:27	541-73-1	
1,4-Dichlorobenzene	**1.30**	ug/m3	1.20	0.335	1	10/24/24 19:27	10/24/24 19:27	106-46-7	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	2.27	0.300	1	10/23/24 00:38	10/23/24 00:38	123-91-1	
2,2,4-Trimethylpentane	**0.701J**	ug/m3	0.934	0.621	1	10/23/24 00:38	10/23/24 00:38	540-84-1	J
2-Butanone (MEK)	**12.2**	ug/m3	3.69	0.240	1	10/23/24 00:38	10/23/24 00:38	78-93-3	
2-Chlorotoluene	ND	ug/m3	1.03	0.427	1	10/24/24 19:27	10/24/24 19:27	95-49-8	
2-Hexanone	**0.892J**	ug/m3	5.11	0.544	1	10/23/24 00:38	10/23/24 00:38	591-78-6	J
2-Propanol	**20.5**	ug/m3	3.07	0.649	1	10/23/24 00:38	10/23/24 00:38	67-63-0	
4-Ethyltoluene	ND	ug/m3	0.982	0.384	1	10/24/24 19:27	10/24/24 19:27	622-96-8	
4-Methyl-2-pentanone (MIBK)	**0.663J**	ug/m3	5.12	0.313	1	10/23/24 00:38	10/23/24 00:38	108-10-1	J
Acetone	**50.1**	ug/m3	2.97	1.39	1	10/23/24 00:38	10/23/24 00:38	67-64-1	
Acetonitrile	**13.1**	ug/m3	8.39	0.395	1	10/23/24 00:38	10/23/24 00:38	75-05-8	
Allyl chloride	ND	ug/m3	0.626	0.357	1	10/23/24 00:38	10/23/24 00:38	107-05-1	
Benzene	**36.1**	ug/m3	0.639	0.228	1	10/23/24 00:38	10/23/24 00:38	71-43-2	
Benzyl chloride	ND	ug/m3	1.04	0.311	1	10/24/24 19:27	10/24/24 19:27	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.471	1	10/23/24 00:38	10/23/24 00:38	75-27-4	
Bromoform	ND	ug/m3	6.21	0.757	1	10/24/24 19:27	10/24/24 19:27	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.381	1	10/23/24 00:38	10/23/24 00:38	74-83-9	
Carbon disulfide	**5.35**	ug/m3	1.24	0.317	1	10/23/24 00:38	10/23/24 00:38	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.26	0.461	1	10/23/24 00:38	10/23/24 00:38	56-23-5	
Chlorobenzene	ND	ug/m3	0.924	0.385	1	10/23/24 00:38	10/23/24 00:38	108-90-7	
Chloroethane	**1.06**	ug/m3	0.528	0.263	1	10/23/24 00:38	10/23/24 00:38	75-00-3	
Chloroform	**2.81**	ug/m3	0.973	0.349	1	10/23/24 00:38	10/23/24 00:38	67-66-3	
Chloromethane	**4.81**	ug/m3	0.413	0.213	1	10/23/24 00:38	10/23/24 00:38	74-87-3	
cis-1,2-Dichloroethene	ND	ug/m3	0.793	0.311	1	10/23/24 00:38	10/23/24 00:38	156-59-2	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.313	1	10/23/24 00:38	10/23/24 00:38	10061-01-5	
Cyclohexane	**0.368J**	ug/m3	0.689	0.259	1	10/23/24 00:38	10/23/24 00:38	110-82-7	J
Dibromochloromethane	ND	ug/m3	1.70	0.618	1	10/23/24 00:38	10/23/24 00:38	124-48-1	
Dichlorodifluoromethane	**2.42**	ug/m3	0.989	0.678	1	10/23/24 00:38	10/23/24 00:38	75-71-8	
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.622	1	10/23/24 00:38	10/23/24 00:38	76-14-2	
Ethanol	**144**	ug/m3	4.71	0.500	1	10/23/24 00:38	10/23/24 00:38	64-17-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: City of Bristol
Pace Project No.: 92759615

Sample: October 24hr **Lab ID: 92759615001** Collected: 10/17/24 10:18 Received: 10/22/24 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								
Ethyl acetate	ND	ug/m3	2.27	0.360	1	10/23/24 00:38	10/23/24 00:38	141-78-6	
Ethylbenzene	ND	ug/m3	0.867	0.362	1	10/24/24 19:27	10/24/24 19:27	100-41-4	
Gasoline	**5740**	ug/m3	1030	164	1	10/23/24 00:38	10/23/24 00:38	8006-61-9	
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	1.12	1	10/24/24 19:27	10/24/24 19:27	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.382	1	10/24/24 19:27	10/24/24 19:27	98-82-8	
m&p-Xylene	**0.629J**	ug/m3	1.73	0.585	1	10/24/24 19:27	10/24/24 19:27	179601-23-1	J
Methyl methacrylate	**4.67**	ug/m3	0.819	0.359	1	10/23/24 00:38	10/23/24 00:38	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.233	1	10/23/24 00:38	10/23/24 00:38	1634-04-4	
Methylene Chloride	**5.94**	ug/m3	0.694	0.340	1	10/23/24 00:38	10/23/24 00:38	75-09-2	
n-Heptane	**0.916**	ug/m3	0.818	0.425	1	10/23/24 00:38	10/23/24 00:38	142-82-5	
n-Hexane	ND	ug/m3	2.22	0.726	1	10/23/24 00:38	10/23/24 00:38	110-54-3	
Naphthalene	ND	ug/m3	3.30	1.83	1	10/24/24 19:27	10/24/24 19:27	91-20-3	
o-Xylene	ND	ug/m3	0.867	0.359	1	10/24/24 19:27	10/24/24 19:27	95-47-6	
Propylene	ND	ug/m3	2.15	0.160	1	10/23/24 00:38	10/23/24 00:38	115-07-1	
Styrene	**0.872J**	ug/m3	1.70	0.335	1	10/24/24 19:27	10/24/24 19:27	100-42-5	J
Tetrachloroethene	**0.693J**	ug/m3	1.36	0.553	1	10/23/24 00:38	10/23/24 00:38	127-18-4	J
Tetrahydrofuran	**1.71**	ug/m3	0.590	0.216	1	10/23/24 00:38	10/23/24 00:38	109-99-9	
Toluene	**4.48**	ug/m3	1.88	0.328	1	10/23/24 00:38	10/23/24 00:38	108-88-3	
trans-1,2-Dichloroethene	ND	ug/m3	0.793	0.267	1	10/23/24 00:38	10/23/24 00:38	156-60-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.331	1	10/23/24 00:38	10/23/24 00:38	10061-02-6	
Trichloroethene	ND	ug/m3	1.07	0.364	1	10/23/24 00:38	10/23/24 00:38	79-01-6	
Trichlorofluoromethane	**4.08**	ug/m3	1.12	0.460	1	10/23/24 00:38	10/23/24 00:38	75-69-4	
Vinyl acetate	**4.16**	ug/m3	2.22	0.408	1	10/23/24 00:38	10/23/24 00:38	108-05-4	
Vinyl bromide	ND	ug/m3	0.875	0.373	1	10/23/24 00:38	10/23/24 00:38	593-60-2	
Vinyl chloride	**1.94**	ug/m3	0.511	0.243	1	10/23/24 00:38	10/23/24 00:38	75-01-4	
Xylene (Total)	**0.630J**	ug/m3	2.61	0.586	1	10/24/24 19:27	10/24/24 19:27	1330-20-7	J
Surrogates									
4-Bromofluorobenzene (S)	131	%	60.0-140		1	10/23/24 00:38	10/23/24 00:38	460-00-4	
4-Bromofluorobenzene (S)	97.3	%	60.0-140		1	10/24/24 19:27	10/24/24 19:27	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: City of Bristol
Pace Project No.: 92759615

QC Batch: 2386979
QC Batch Method: TO-15
Analysis Method: TO-15
Analysis Description: VOA (MS) TO-15
Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 92759615001

METHOD BLANK: R4136021-3 Matrix: Air

Associated Lab Samples: 92759615001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	1.09	0.400	10/22/24 09:15	
1,1,2-Trichloroethane	ug/m3	ND	1.09	0.422	10/22/24 09:15	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	1.53	0.608	10/22/24 09:15	
1,1-Dichloroethane	ug/m3	ND	0.802	0.290	10/22/24 09:15	
1,1-Dichloroethene	ug/m3	ND	0.793	0.302	10/22/24 09:15	
1,2-Dibromoethane (EDB)	ug/m3	ND	1.54	0.554	10/22/24 09:15	
1,2-Dichloroethane	ug/m3	ND	0.810	0.283	10/22/24 09:15	
1,2-Dichloropropane	ug/m3	ND	0.924	0.351	10/22/24 09:15	
1,3-Butadiene	ug/m3	ND	4.43	0.230	10/22/24 09:15	
1,4-Dioxane (p-Dioxane)	ug/m3	ND	2.27	0.300	10/22/24 09:15	
2,2,4-Trimethylpentane	ug/m3	ND	0.934	0.621	10/22/24 09:15	
2-Butanone (MEK)	ug/m3	ND	3.69	0.240	10/22/24 09:15	
2-Hexanone	ug/m3	ND	5.11	0.544	10/22/24 09:15	
2-Propanol	ug/m3	ND	3.07	0.649	10/22/24 09:15	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	5.12	0.313	10/22/24 09:15	
Acetone	ug/m3	ND	2.97	1.39	10/22/24 09:15	
Acetonitrile	ug/m3	ND	8.39	0.395	10/22/24 09:15	
Allyl chloride	ug/m3	ND	0.626	0.357	10/22/24 09:15	
Benzene	ug/m3	ND	0.639	0.228	10/22/24 09:15	
Bromodichloromethane	ug/m3	ND	1.34	0.471	10/22/24 09:15	
Bromomethane	ug/m3	ND	0.776	0.381	10/22/24 09:15	
Carbon disulfide	ug/m3	ND	1.24	0.317	10/22/24 09:15	
Carbon tetrachloride	ug/m3	ND	1.26	0.461	10/22/24 09:15	
Chlorobenzene	ug/m3	ND	0.924	0.385	10/22/24 09:15	
Chloroethane	ug/m3	ND	0.528	0.263	10/22/24 09:15	
Chloroform	ug/m3	ND	0.973	0.349	10/22/24 09:15	
Chloromethane	ug/m3	ND	0.413	0.213	10/22/24 09:15	
cis-1,2-Dichloroethene	ug/m3	ND	0.793	0.311	10/22/24 09:15	
cis-1,3-Dichloropropene	ug/m3	ND	0.908	0.313	10/22/24 09:15	
Cyclohexane	ug/m3	ND	0.689	0.259	10/22/24 09:15	
Dibromochloromethane	ug/m3	ND	1.70	0.618	10/22/24 09:15	
Dichlorodifluoromethane	ug/m3	ND	0.989	0.678	10/22/24 09:15	
Dichlorotetrafluoroethane	ug/m3	ND	1.40	0.622	10/22/24 09:15	
Ethanol	ug/m3	ND	4.71	0.500	10/22/24 09:15	
Ethyl acetate	ug/m3	ND	2.27	0.360	10/22/24 09:15	
Gasoline	ug/m3	331J	1030	164	10/22/24 09:15	J
Methyl methacrylate	ug/m3	ND	0.819	0.359	10/22/24 09:15	
Methyl-tert-butyl ether	ug/m3	ND	0.721	0.233	10/22/24 09:15	
Methylene Chloride	ug/m3	ND	0.694	0.340	10/22/24 09:15	
n-Heptane	ug/m3	ND	0.818	0.425	10/22/24 09:15	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: City of Bristol
Pace Project No.: 92759615

METHOD BLANK: R4136021-3 Matrix: Air
Associated Lab Samples: 92759615001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
n-Hexane	ug/m3	ND	2.22	0.726	10/22/24 09:15	
Propylene	ug/m3	ND	2.15	0.160	10/22/24 09:15	
Tetrachloroethene	ug/m3	ND	1.36	0.553	10/22/24 09:15	
Tetrahydrofuran	ug/m3	ND	0.590	0.216	10/22/24 09:15	
Toluene	ug/m3	ND	1.88	0.328	10/22/24 09:15	
trans-1,2-Dichloroethene	ug/m3	ND	0.793	0.267	10/22/24 09:15	
trans-1,3-Dichloropropene	ug/m3	ND	0.908	0.331	10/22/24 09:15	
Trichloroethene	ug/m3	ND	1.07	0.364	10/22/24 09:15	
Trichlorofluoromethane	ug/m3	ND	1.12	0.460	10/22/24 09:15	
Vinyl acetate	ug/m3	ND	2.22	0.408	10/22/24 09:15	
Vinyl bromide	ug/m3	ND	0.875	0.373	10/22/24 09:15	
Vinyl chloride	ug/m3	ND	0.511	0.243	10/22/24 09:15	
4-Bromofluorobenzene (S)	%	102	60.0-140		10/22/24 09:15	

LABORATORY CONTROL SAMPLE & LCSD: R4136021-1 R4136021-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	3.75	20.2	20.9	99.2	103	70.0-130	3.43	25	
1,1,2-Trichloroethane	ug/m3	3.75	20.3	20.2	99.5	99.2	70.0-130	0.268	25	
1,1,2-Trichlorotrifluoroethane	ug/m3	3.75	30.0	30.5	104	106	70.0-130	1.77	25	
1,1-Dichloroethane	ug/m3	3.75	15.2	15.4	101	102	70.0-130	1.31	25	
1,1-Dichloroethene	ug/m3	3.75	15.4	15.8	103	106	70.0-130	2.80	25	
1,2-Dibromoethane (EDB)	ug/m3	3.75	28.4	28.9	98.4	100	70.0-130	1.88	25	
1,2-Dichloroethane	ug/m3	3.75	15.1	15.3	99.7	101	70.0-130	1.33	25	
1,2-Dichloropropane	ug/m3	3.75	17.8	17.8	103	103	70.0-130	0.259	25	
1,3-Butadiene	ug/m3	3.75	8.12	8.39	97.9	101	70.0-130	3.22	25	
1,4-Dioxane (p-Dioxane)	ug/m3	3.75	12.6	13.3	93.3	98.7	70.0-140	5.56	25	
2,2,4-Trimethylpentane	ug/m3	3.75	17.8	18.1	101	103	70.0-130	2.08	25	
2-Butanone (MEK)	ug/m3	3.75	11.6	11.7	105	106	70.0-130	0.759	25	
2-Hexanone	ug/m3	3.75	15.7	16.0	102	105	70.0-149	2.06	25	
2-Propanol	ug/m3	3.75	9.46	9.73	103	106	70.0-139	2.82	25	
4-Methyl-2-pentanone (MIBK)	ug/m3	3.75	13.8	14.4	89.9	93.6	70.0-139	4.07	25	
Acetone	ug/m3	3.75	9.51	9.72	107	109	70.0-130	2.22	25	
Acetonitrile	ug/m3	18.8	32.7	33.7	104	107	70.0-130	3.03	25	
Allyl chloride	ug/m3	3.75	12.0	12.4	102	106	70.0-130	3.08	25	
Benzene	ug/m3	3.75	11.9	11.9	99.7	98.9	70.0-130	0.805	25	
Bromodichloromethane	ug/m3	3.75	25.2	25.6	100	102	70.0-130	1.59	25	
Bromomethane	ug/m3	3.75	14.4	15.0	98.7	103	70.0-130	4.49	25	
Carbon disulfide	ug/m3	7.50	24.6	25.5	105	109	70.0-130	3.60	25	
Carbon tetrachloride	ug/m3	3.75	23.2	24.0	98.4	102	70.0-130	3.20	25	
Chlorobenzene	ug/m3	3.75	17.4	16.9	100	97.6	70.0-130	2.70	25	
Chloroethane	ug/m3	3.75	9.79	10.4	98.9	105	70.0-130	5.76	25	
Chloroform	ug/m3	3.75	18.4	19.2	101	105	70.0-130	3.88	25	
Chloromethane	ug/m3	3.75	7.46	7.68	96.3	99.2	70.0-130	3.00	25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: City of Bristol
Pace Project No.: 92759615

LABORATORY CONTROL SAMPLE & LCSD: R4136021-1 R4136021-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
cis-1,2-Dichloroethene	ug/m3	3.75	15.0	15.5	101	105	70.0-130	3.64	25	
cis-1,3-Dichloropropene	ug/m3	3.75	17.5	17.2	103	101	70.0-130	2.09	25	
Cyclohexane	ug/m3	3.75	12.9	13.1	100	102	70.0-130	1.59	25	
Dibromochloromethane	ug/m3	3.75	32.4	32.4	102	102	70.0-130	0.00	25	
Dichlorodifluoromethane	ug/m3	3.75	18.2	18.7	97.9	101	64.0-139	3.22	25	
Dichlorotetrafluoroethane	ug/m3	3.75	27.1	27.6	103	105	70.0-130	2.05	25	
Ethanol	ug/m3	3.75	6.84	7.15	96.8	101	55.0-148	4.31	25	
Ethyl acetate	ug/m3	3.75	13.9	14.2	103	105	70.0-130	2.30	25	
Gasoline	ug/m3	349	1530	1570	106	109	70.0-130	2.66	25	
Methyl methacrylate	ug/m3	3.75	15.7	15.6	102	102	70.0-130	0.784	25	
Methyl-tert-butyl ether	ug/m3	3.75	13.8	14.1	102	104	70.0-130	1.81	25	
Methylene Chloride	ug/m3	3.75	13.5	13.8	104	106	70.0-130	1.53	25	
n-Heptane	ug/m3	3.75	15.3	15.3	99.5	100	70.0-130	0.535	25	
n-Hexane	ug/m3	3.75	13.6	13.7	103	103	70.0-130	0.517	25	
Propylene	ug/m3	3.75	6.28	6.49	97.3	101	64.0-144	3.23	25	
Tetrachloroethene	ug/m3	3.75	25.0	26.2	98.1	103	70.0-130	4.77	25	
Tetrahydrofuran	ug/m3	3.75	10.8	11.0	97.3	99.2	70.0-137	1.90	25	
Toluene	ug/m3	3.75	14.1	14.3	99.7	101	70.0-130	1.59	25	
trans-1,2-Dichloroethene	ug/m3	3.75	15.0	15.0	101	101	70.0-130	0.00	25	
trans-1,3-Dichloropropene	ug/m3	3.75	17.8	17.0	104	100	70.0-130	4.18	25	
Trichloroethene	ug/m3	3.75	20.6	20.4	103	102	70.0-130	1.04	25	
Trichlorofluoromethane	ug/m3	3.75	21.8	22.2	103	105	70.0-130	1.79	25	
Vinyl acetate	ug/m3	3.75	13.6	13.8	103	104	70.0-130	1.29	25	
Vinyl bromide	ug/m3	3.75	17.2	17.7	105	108	70.0-130	2.75	25	
Vinyl chloride	ug/m3	3.75	9.59	9.89	100	103	70.0-130	3.15	25	
4-Bromofluorobenzene (S)	%				102	101	60.0-140			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: City of Bristol
Pace Project No.: 92759615

QC Batch: 2388862
QC Batch Method: TO-15
Analysis Method: TO-15
Analysis Description: VOA (MS) TO-15
Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 92759615001

METHOD BLANK: R4137461-3 Matrix: Air
Associated Lab Samples: 92759615001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,2,2-Tetrachloroethane	ug/m3	ND	1.37	0.511	10/24/24 16:18	
1,2,4-Trichlorobenzene	ug/m3	ND	4.66	1.10	10/24/24 16:18	
1,2,4-Trimethylbenzene	ug/m3	ND	0.982	0.375	10/24/24 16:18	
1,2-Dichlorobenzene	ug/m3	ND	1.20	0.770	10/24/24 16:18	
1,3,5-Trimethylbenzene	ug/m3	ND	0.982	0.382	10/24/24 16:18	
1,3-Dichlorobenzene	ug/m3	ND	1.20	1.09	10/24/24 16:18	
1,4-Dichlorobenzene	ug/m3	ND	1.20	0.335	10/24/24 16:18	
2-Chlorotoluene	ug/m3	ND	1.03	0.427	10/24/24 16:18	
4-Ethyltoluene	ug/m3	ND	0.982	0.384	10/24/24 16:18	
Benzyl chloride	ug/m3	ND	1.04	0.311	10/24/24 16:18	
Bromoform	ug/m3	ND	6.21	0.757	10/24/24 16:18	
Ethylbenzene	ug/m3	ND	0.867	0.362	10/24/24 16:18	
Hexachloro-1,3-butadiene	ug/m3	ND	6.73	1.12	10/24/24 16:18	
Isopropylbenzene (Cumene)	ug/m3	ND	0.983	0.382	10/24/24 16:18	
m&p-Xylene	ug/m3	ND	1.73	0.585	10/24/24 16:18	
Naphthalene	ug/m3	ND	3.30	1.83	10/24/24 16:18	
o-Xylene	ug/m3	ND	0.867	0.359	10/24/24 16:18	
Styrene	ug/m3	ND	1.70	0.335	10/24/24 16:18	
Xylene (Total)	ug/m3	ND	2.61	0.586	10/24/24 16:18	
4-Bromofluorobenzene (S)	%	96.3	60.0-140		10/24/24 16:18	

LABORATORY CONTROL SAMPLE & LCSD: R4137461-1 R4137461-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,2,2-Tetrachloroethane	ug/m3	3.75	22.1	22.4	85.9	86.9	70.0-130	1.23	25	
1,2,4-Trichlorobenzene	ug/m3	3.75	26.9	26.8	97.1	96.5	70.0-160	0.551	25	
1,2,4-Trimethylbenzene	ug/m3	3.75	16.8	17.1	91.5	92.8	70.0-130	1.45	25	
1,2-Dichlorobenzene	ug/m3	3.75	20.7	20.9	92.0	92.8	70.0-130	0.866	25	
1,3,5-Trimethylbenzene	ug/m3	3.75	17.0	17.3	92.3	93.9	70.0-130	1.72	25	
1,3-Dichlorobenzene	ug/m3	3.75	20.9	21.1	92.5	93.6	70.0-130	1.15	25	
1,4-Dichlorobenzene	ug/m3	3.75	21.2	21.5	94.1	95.2	70.0-130	1.13	25	
2-Chlorotoluene	ug/m3	3.75	17.5	17.8	90.4	92.0	70.0-130	1.75	25	
4-Ethyltoluene	ug/m3	3.75	16.9	17.2	91.7	93.3	70.0-130	1.73	25	
Benzyl chloride	ug/m3	3.75	17.8	18.2	91.2	93.6	70.0-152	2.60	25	
Bromoform	ug/m3	3.75	34.4	34.7	88.5	89.3	70.0-130	0.900	25	
Ethylbenzene	ug/m3	3.75	14.3	14.5	88.0	89.1	70.0-130	1.20	25	
Hexachloro-1,3-butadiene	ug/m3	3.75	37.3	37.7	93.1	94.1	70.0-151	1.14	25	
Isopropylbenzene (Cumene)	ug/m3	3.75	17.0	17.3	92.0	93.6	70.0-130	1.72	25	
m&p-Xylene	ug/m3	7.50	29.5	30.0	90.7	92.3	70.0-130	1.75	25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: City of Bristol
Pace Project No.: 92759615

LABORATORY CONTROL SAMPLE & LCSD: R4137461-1 R4137461-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Naphthalene	ug/m3	3.75	18.7	19.3	95.2	98.1	70.0-159	3.03	25	
o-Xylene	ug/m3	3.75	14.7	14.8	90.1	91.2	70.0-130	1.18	25	
Styrene	ug/m3	7.50	30.1	30.8	94.4	96.5	70.0-130	2.23	25	
Xylene (Total)	ug/m3	11.3	44.3	44.7	90.3	91.2	70.0-130	0.976	25	
4-Bromofluorobenzene (S)	%				98.7	98.4	60.0-140			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALIFIERS

Project: City of Bristol
Pace Project No.: 92759615

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

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

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: City of Bristol
Pace Project No.: 92759615

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92759615001	**October 24hr**	TO-15	2386979	TO-15	2386979
92759615001	**October 24hr**	TO-15	2388862	TO-15	2388862

WO#: 92759615

PM: EDB Due Date: 10/29/24

CLIENT: 92-BristolVA

WO#: 92759615

92759615

Pace® Location Requested (City/State):

Air CHAIN-OF-CUSTODY Analytic

Chain-of-Custody is a LEGAL DOCUMENT

T / P #:

Company Name: **Pace Analytical - Huntersville, NC**	Contact/Report To: **Eben Buchan**
Street Address: **9800 Kincey Avenue, Suite 100 Huntersville, NC 28078**	Phone #: **704-875-9092**
City, State Zip:	E-Mail: **eben.buchanan@pacelabs**
Customer Project #:	Cc E-Mail:
Project Name: **City of Bristol**	Invoice to:
Site Collection Info/Facility ID (as applicable): **PACE-POULSONVA 001**	Invoice E-Mail:
Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET	Purchase Order # (if applicable):
Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other	Quote #:
Regulatory Program (CAA, RCRA, etc.) as applicable:	State origin of sample(s):
Rush (Pre-approval required): 2 Day 3 day 5 day Other	Permit # as applicable:
Date Results Requested:	Units for Reporting: ug/m³ PPBV mg/m³ PPMV

AN 10/3/24

Proj. Manager: **464 - Nancy McLain**

AcctNum / Client ID: **PACE**

Table # **M206**

Profile / Template: **T210823**

Prelog / Bottle Ord. ID: **P1100237**

Lab Use Only

* Matrix Codes (Insert in Matrix box below): Ambient (A), Indoor (I), Soil Vapor (SV), Other (O)

Customer Sample ID	Matrix *	Summa Canister ID	Flow Controller ID	Begin Collection Date	Begin Collection Time	End Collection Date	End Collection Time	Field Information: Canister Pressure / Vacuum — Start Pressure / Vacuum (in Hg)	Canister Pressure / Vacuum — End Pressure / Vacuum (in Hg)	PUF / FILTER — Duration (minutes)	PUF / FILTER — Flow Rate m³/min or L/min	PUF / FILTER — Total Volume Sampled m³ or L	Analyses Requested: TO-15 Summa	Sample Comment
October 24hr		02857[illegible]	01411[illegible]	10/16/24	10:18	10/17/24	10:18	28	0				✓	L1741431-01

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:

Additional Instructions from Pace®:

Coolers: Thermometer ID: Correction Factor (°C): Obs Temp. (°C): Corrected Temp (°C):

Relinquished by/Company: (Signature) City of Bristol VA	Date/Time: 10/17/24 11:[illegible]	Received by/Company: (Signature) Easton Organ	Date/Time: 10/22/24 0900	Tracking Number:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: In Person Courier FedEx UPS Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company (Signature)	Date/Time:	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company (Signature)	Date/Time:	Page: ____ of: ____

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/