



January 29, 2024

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

RE: Project: City of Bristol
Pace Project No.: 92710374

Dear David Cochran:

Enclosed are the analytical results for sample(s) received by the laboratory on January 25, 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
Mehdi Mehrazaran, Geosyntec Consultants, Inc.
Jennifer Robb, City of Bristol VA



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: City of Bristol
Pace Project No.: 92710374

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.: 92710374

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92710374001	January 24 Hr Sample	Air	01/24/24 10:15	01/25/24 09:30

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SAMPLE ANALYTE COUNT

Project: City of Bristol

Pace Project No.: 92710374

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92710374001	January 24 Hr Sample	TO-15	DAH	72	PAN

PAN = Pace National - Mt. Juliet

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SUMMARY OF DETECTION

Project: City of Bristol

Pace Project No.: 92710374

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92710374001	January 24 Hr Sample					
TO-15	Gasoline	308J	ug/m3	1030	01/26/24 20:05	B,J
TO-15	Acetone	10.5	ug/m3	2.97	01/26/24 20:05	
TO-15	Benzene	5.69	ug/m3	0.639	01/26/24 20:05	
TO-15	Carbon disulfide	1.39	ug/m3	0.622	01/26/24 20:05	
TO-15	Chloromethane	1.10	ug/m3	0.413	01/26/24 20:05	
TO-15	Ethanol	4.94	ug/m3	4.71	01/26/24 20:05	B
TO-15	Ethylbenzene	1.09	ug/m3	0.867	01/26/24 20:05	
TO-15	Trichlorofluoromethane	1.16	ug/m3	1.12	01/26/24 20:05	
TO-15	Dichlorodifluoromethane	2.34	ug/m3	0.989	01/26/24 20:05	
TO-15	n-Heptane	0.470J	ug/m3	0.818	01/26/24 20:05	J
TO-15	Methylene Chloride	0.670J	ug/m3	0.694	01/26/24 20:05	J
TO-15	2-Butanone (MEK)	2.31J	ug/m3	3.69	01/26/24 20:05	J
TO-15	2-Propanol	2.30J	ug/m3	3.07	01/26/24 20:05	J
TO-15	Propylene	2.65	ug/m3	2.15	01/26/24 20:05	
TO-15	Tetrahydrofuran	0.861	ug/m3	0.590	01/26/24 20:05	
TO-15	Toluene	2.83	ug/m3	1.88	01/26/24 20:05	
TO-15	m&p-Xylene	1.90	ug/m3	1.73	01/26/24 20:05	
TO-15	o-Xylene	0.785J	ug/m3	0.867	01/26/24 20:05	J
TO-15	Xylene (Total)	2.69	ug/m3	2.61	01/26/24 20:05	

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PROJECT NARRATIVE

Project: City of Bristol
Pace Project No.: 92710374

Method: TO-15
Description: VOA (MS) TO-15
Client: City of Bristol VA
Date: January 29, 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.

QC Batch: 2213908

B: Analyte was detected in the associated method blank.

- R4026726-3 (Lab ID: R4026726-3)
 - Ethanol
 - Gasoline

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.: 92710374

Sample: January 24 Hr Sample Lab ID: 92710374001 Collected: 01/24/24 10:15 Received: 01/25/24 09:30 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	308J	ug/m3	1030	164	1	01/26/24 20:05	01/26/24 20:05	8006-61-9	B,J
Acetone	10.5	ug/m3	2.97	1.39	1	01/26/24 20:05	01/26/24 20:05	67-64-1	
Acetonitrile	ND	ug/m3	8.39	0.395	1	01/26/24 20:05	01/26/24 20:05	75-05-8	
Allyl chloride	ND	ug/m3	0.626	0.357	1	01/26/24 20:05	01/26/24 20:05	107-05-1	
Benzene	5.69	ug/m3	0.639	0.228	1	01/26/24 20:05	01/26/24 20:05	71-43-2	
Benzyl chloride	ND	ug/m3	1.04	0.311	1	01/26/24 20:05	01/26/24 20:05	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.471	1	01/26/24 20:05	01/26/24 20:05	75-27-4	
Bromoform	ND	ug/m3	6.21	0.757	1	01/26/24 20:05	01/26/24 20:05	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.381	1	01/26/24 20:05	01/26/24 20:05	74-83-9	
1,3-Butadiene	ND	ug/m3	4.43	0.230	1	01/26/24 20:05	01/26/24 20:05	106-99-0	
Carbon disulfide	1.39	ug/m3	0.622	0.317	1	01/26/24 20:05	01/26/24 20:05	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.26	0.461	1	01/26/24 20:05	01/26/24 20:05	56-23-5	
Chlorobenzene	ND	ug/m3	0.924	0.385	1	01/26/24 20:05	01/26/24 20:05	108-90-7	
Chloroethane	ND	ug/m3	0.528	0.263	1	01/26/24 20:05	01/26/24 20:05	75-00-3	
Chloroform	ND	ug/m3	0.973	0.349	1	01/26/24 20:05	01/26/24 20:05	67-66-3	
Chloromethane	1.10	ug/m3	0.413	0.213	1	01/26/24 20:05	01/26/24 20:05	74-87-3	
2-Chlorotoluene	ND	ug/m3	1.03	0.427	1	01/26/24 20:05	01/26/24 20:05	95-49-8	
Cyclohexane	ND	ug/m3	0.689	0.259	1	01/26/24 20:05	01/26/24 20:05	110-82-7	
Dibromochloromethane	ND	ug/m3	1.70	0.618	1	01/26/24 20:05	01/26/24 20:05	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.554	1	01/26/24 20:05	01/26/24 20:05	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.770	1	01/26/24 20:05	01/26/24 20:05	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	1.09	1	01/26/24 20:05	01/26/24 20:05	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	1.20	0.335	1	01/26/24 20:05	01/26/24 20:05	106-46-7	
1,2-Dichloroethane	ND	ug/m3	0.810	0.283	1	01/26/24 20:05	01/26/24 20:05	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.290	1	01/26/24 20:05	01/26/24 20:05	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.302	1	01/26/24 20:05	01/26/24 20:05	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.793	0.311	1	01/26/24 20:05	01/26/24 20:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.793	0.267	1	01/26/24 20:05	01/26/24 20:05	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.924	0.351	1	01/26/24 20:05	01/26/24 20:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.313	1	01/26/24 20:05	01/26/24 20:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.331	1	01/26/24 20:05	01/26/24 20:05	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	2.27	0.300	1	01/26/24 20:05	01/26/24 20:05	123-91-1	
Ethanol	4.94	ug/m3	4.71	0.500	1	01/26/24 20:05	01/26/24 20:05	64-17-5	B
Ethylbenzene	1.09	ug/m3	0.867	0.362	1	01/26/24 20:05	01/26/24 20:05	100-41-4	
Ethyl acetate	ND	ug/m3	2.27	0.360	1	01/26/24 20:05	01/26/24 20:05	141-78-6	
4-Ethyltoluene	ND	ug/m3	0.982	0.384	1	01/26/24 20:05	01/26/24 20:05	622-96-8	
Trichlorofluoromethane	1.16	ug/m3	1.12	0.460	1	01/26/24 20:05	01/26/24 20:05	75-69-4	
Dichlorodifluoromethane	2.34	ug/m3	0.989	0.678	1	01/26/24 20:05	01/26/24 20:05	75-71-8	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.53	0.608	1	01/26/24 20:05	01/26/24 20:05	76-13-1	
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.622	1	01/26/24 20:05	01/26/24 20:05	76-14-2	
n-Heptane	0.470J	ug/m3	0.818	0.425	1	01/26/24 20:05	01/26/24 20:05	142-82-5	J
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	1.12	1	01/26/24 20:05	01/26/24 20:05	87-68-3	
n-Hexane	ND	ug/m3	2.22	0.726	1	01/26/24 20:05	01/26/24 20:05	110-54-3	
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.382	1	01/26/24 20:05	01/26/24 20:05	98-82-8	
Methylene Chloride	0.670J	ug/m3	0.694	0.340	1	01/26/24 20:05	01/26/24 20:05	75-09-2	J

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: City of Bristol
Pace Project No.: 92710374

Sample: January 24 Hr Sample Lab ID: 92710374001 Collected: 01/24/24 10:15 Received: 01/25/24 09:30 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									
2-Hexanone	ND	ug/m3	5.11	0.544	1	01/26/24 20:05	01/26/24 20:05	591-78-6	
2-Butanone (MEK)	2.31J	ug/m3	3.69	0.240	1	01/26/24 20:05	01/26/24 20:05	78-93-3	J
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	5.12	0.313	1	01/26/24 20:05	01/26/24 20:05	108-10-1	
Methyl methacrylate	ND	ug/m3	0.819	0.359	1	01/26/24 20:05	01/26/24 20:05	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.233	1	01/26/24 20:05	01/26/24 20:05	1634-04-4	
Naphthalene	ND	ug/m3	3.30	1.83	1	01/26/24 20:05	01/26/24 20:05	91-20-3	
2-Propanol	2.30J	ug/m3	3.07	0.649	1	01/26/24 20:05	01/26/24 20:05	67-63-0	J
Propylene	2.65	ug/m3	2.15	0.160	1	01/26/24 20:05	01/26/24 20:05	115-07-1	
Styrene	ND	ug/m3	0.851	0.335	1	01/26/24 20:05	01/26/24 20:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.511	1	01/26/24 20:05	01/26/24 20:05	79-34-5	
Tetrachloroethene	ND	ug/m3	1.36	0.553	1	01/26/24 20:05	01/26/24 20:05	127-18-4	
Tetrahydrofuran	0.861	ug/m3	0.590	0.216	1	01/26/24 20:05	01/26/24 20:05	109-99-9	
Toluene	2.83	ug/m3	1.88	0.328	1	01/26/24 20:05	01/26/24 20:05	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	1.10	1	01/26/24 20:05	01/26/24 20:05	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.400	1	01/26/24 20:05	01/26/24 20:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.422	1	01/26/24 20:05	01/26/24 20:05	79-00-5	
Trichloroethene	ND	ug/m3	1.07	0.364	1	01/26/24 20:05	01/26/24 20:05	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	0.982	0.375	1	01/26/24 20:05	01/26/24 20:05	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	0.982	0.382	1	01/26/24 20:05	01/26/24 20:05	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	0.934	0.621	1	01/26/24 20:05	01/26/24 20:05	540-84-1	
Vinyl chloride	ND	ug/m3	0.511	0.243	1	01/26/24 20:05	01/26/24 20:05	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.373	1	01/26/24 20:05	01/26/24 20:05	593-60-2	
Vinyl acetate	ND	ug/m3	2.22	0.408	1	01/26/24 20:05	01/26/24 20:05	108-05-4	
m&p-Xylene	1.90	ug/m3	1.73	0.585	1	01/26/24 20:05	01/26/24 20:05	179601-23-1	
o-Xylene	0.785J	ug/m3	0.867	0.359	1	01/26/24 20:05	01/26/24 20:05	95-47-6	J
Xylene (Total)	2.69	ug/m3	2.61	0.586	1	01/26/24 20:05	01/26/24 20:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94.7	%	60.0-140		1	01/26/24 20:05	01/26/24 20:05	460-00-4	

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QUALITY CONTROL DATA

Project: City of Bristol
Pace Project No.: 92710374

QC Batch: 2213908 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: VOA (MS) TO-15
Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 92710374001

METHOD BLANK: R4026726-3 Matrix: Air
Associated Lab Samples: 92710374001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Gasoline	ug/m3	247J	1030	164	01/26/24 10:25	J
Acetone	ug/m3	ND	2.97	1.39	01/26/24 10:25	
Acetonitrile	ug/m3	ND	8.39	0.395	01/26/24 10:25	
Allyl chloride	ug/m3	ND	0.626	0.357	01/26/24 10:25	
Benzene	ug/m3	ND	0.639	0.228	01/26/24 10:25	
Benzyl chloride	ug/m3	ND	1.04	0.311	01/26/24 10:25	
Bromodichloromethane	ug/m3	ND	1.34	0.471	01/26/24 10:25	
Bromoform	ug/m3	ND	6.21	0.757	01/26/24 10:25	
Bromomethane	ug/m3	ND	0.776	0.381	01/26/24 10:25	
1,3-Butadiene	ug/m3	ND	4.43	0.230	01/26/24 10:25	
Carbon disulfide	ug/m3	ND	0.622	0.317	01/26/24 10:25	
Carbon tetrachloride	ug/m3	ND	1.26	0.461	01/26/24 10:25	
Chlorobenzene	ug/m3	ND	0.924	0.385	01/26/24 10:25	
Chloroethane	ug/m3	ND	0.528	0.263	01/26/24 10:25	
Chloroform	ug/m3	ND	0.973	0.349	01/26/24 10:25	
Chloromethane	ug/m3	ND	0.413	0.213	01/26/24 10:25	
2-Chlorotoluene	ug/m3	ND	1.03	0.427	01/26/24 10:25	
Cyclohexane	ug/m3	ND	0.689	0.259	01/26/24 10:25	
Dibromochloromethane	ug/m3	ND	1.70	0.618	01/26/24 10:25	
1,2-Dibromoethane (EDB)	ug/m3	ND	1.54	0.554	01/26/24 10:25	
1,2-Dichlorobenzene	ug/m3	ND	1.20	0.770	01/26/24 10:25	
1,3-Dichlorobenzene	ug/m3	ND	1.20	1.09	01/26/24 10:25	
1,4-Dichlorobenzene	ug/m3	ND	1.20	0.335	01/26/24 10:25	
1,2-Dichloroethane	ug/m3	ND	0.810	0.283	01/26/24 10:25	
1,1-Dichloroethane	ug/m3	ND	0.802	0.290	01/26/24 10:25	
1,1-Dichloroethene	ug/m3	ND	0.793	0.302	01/26/24 10:25	
cis-1,2-Dichloroethene	ug/m3	ND	0.793	0.311	01/26/24 10:25	
trans-1,2-Dichloroethene	ug/m3	ND	0.793	0.267	01/26/24 10:25	
1,2-Dichloropropane	ug/m3	ND	0.924	0.351	01/26/24 10:25	
cis-1,3-Dichloropropene	ug/m3	ND	0.908	0.313	01/26/24 10:25	
trans-1,3-Dichloropropene	ug/m3	ND	0.908	0.331	01/26/24 10:25	
1,4-Dioxane (p-Dioxane)	ug/m3	ND	2.27	0.300	01/26/24 10:25	
Ethanol	ug/m3	0.786J	4.71	0.500	01/26/24 10:25	J
Ethylbenzene	ug/m3	ND	0.867	0.362	01/26/24 10:25	
Ethyl acetate	ug/m3	ND	2.27	0.360	01/26/24 10:25	
4-Ethyltoluene	ug/m3	ND	0.982	0.384	01/26/24 10:25	
Trichlorofluoromethane	ug/m3	ND	1.12	0.460	01/26/24 10:25	
Dichlorodifluoromethane	ug/m3	ND	0.989	0.678	01/26/24 10:25	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	1.53	0.608	01/26/24 10:25	
Dichlorotetrafluoroethane	ug/m3	ND	1.40	0.622	01/26/24 10:25	

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.: 92710374

METHOD BLANK: R4026726-3

Matrix: Air

Associated Lab Samples: 92710374001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
n-Heptane	ug/m3	ND	0.818	0.425	01/26/24 10:25	
Hexachloro-1,3-butadiene	ug/m3	ND	6.73	1.12	01/26/24 10:25	
n-Hexane	ug/m3	ND	2.22	0.726	01/26/24 10:25	
Isopropylbenzene (Cumene)	ug/m3	ND	0.983	0.382	01/26/24 10:25	
Methylene Chloride	ug/m3	ND	0.694	0.340	01/26/24 10:25	
2-Hexanone	ug/m3	ND	5.11	0.544	01/26/24 10:25	
2-Butanone (MEK)	ug/m3	ND	3.69	0.240	01/26/24 10:25	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	5.12	0.313	01/26/24 10:25	
Methyl methacrylate	ug/m3	ND	0.819	0.359	01/26/24 10:25	
Methyl-tert-butyl ether	ug/m3	ND	0.721	0.233	01/26/24 10:25	
Naphthalene	ug/m3	ND	3.30	1.83	01/26/24 10:25	
2-Propanol	ug/m3	ND	3.07	0.649	01/26/24 10:25	
Propylene	ug/m3	ND	2.15	0.160	01/26/24 10:25	
Styrene	ug/m3	ND	0.851	0.335	01/26/24 10:25	
1,1,2,2-Tetrachloroethane	ug/m3	ND	1.37	0.511	01/26/24 10:25	
Tetrachloroethene	ug/m3	ND	1.36	0.553	01/26/24 10:25	
Tetrahydrofuran	ug/m3	ND	0.590	0.216	01/26/24 10:25	
Toluene	ug/m3	ND	1.88	0.328	01/26/24 10:25	
1,2,4-Trichlorobenzene	ug/m3	ND	4.66	1.10	01/26/24 10:25	
1,1,1-Trichloroethane	ug/m3	ND	1.09	0.400	01/26/24 10:25	
1,1,2-Trichloroethane	ug/m3	ND	1.09	0.422	01/26/24 10:25	
Trichloroethene	ug/m3	ND	1.07	0.364	01/26/24 10:25	
1,2,4-Trimethylbenzene	ug/m3	ND	0.982	0.375	01/26/24 10:25	
1,3,5-Trimethylbenzene	ug/m3	ND	0.982	0.382	01/26/24 10:25	
2,2,4-Trimethylpentane	ug/m3	ND	0.934	0.621	01/26/24 10:25	
Vinyl chloride	ug/m3	ND	0.511	0.243	01/26/24 10:25	
Vinyl bromide	ug/m3	ND	0.875	0.373	01/26/24 10:25	
Vinyl acetate	ug/m3	ND	2.22	0.408	01/26/24 10:25	
m&p-Xylene	ug/m3	ND	1.73	0.585	01/26/24 10:25	
o-Xylene	ug/m3	ND	0.867	0.359	01/26/24 10:25	
Xylene (Total)	ug/m3	ND	2.61	0.586	01/26/24 10:25	
4-Bromofluorobenzene (S)	%	96.6	60.0-140		01/26/24 10:25	

LABORATORY CONTROL SAMPLE & LCSD: R4026726-1

R4026726-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	% Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline	ug/m3	1440	1360	1380	94.6	95.7	70.0-130	1.20	25	
Acetone	ug/m3	8.91	8.72	8.86	97.9	99.5	70.0-130	1.62	25	
Acetonitrile	ug/m3	31.6	28.4	29.0	89.9	92.0	70.0-130	2.34	25	
Allyl chloride	ug/m3	11.7	9.39	9.77	80.0	83.2	70.0-130	3.92	25	
Benzene	ug/m3	12.0	11.9	12.2	98.9	102	70.0-130	2.66	25	
Benzyl chloride	ug/m3	19.5	20.0	19.9	103	102	70.0-152	0.260	25	
Bromodichloromethane	ug/m3	25.2	23.0	23.2	91.5	92.3	70.0-130	0.871	25	
Bromoform	ug/m3	38.8	36.0	36.3	92.8	93.6	70.0-130	0.858	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: City of Bristol
Pace Project No.: 92710374

LABORATORY CONTROL SAMPLE & LCSD: R4026726-1			R4026726-2							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Bromomethane	ug/m3	14.6	14.0	14.2	96.3	97.6	70.0-130	1.38	25	
1,3-Butadiene	ug/m3	8.30	7.97	8.16	96.0	98.4	70.0-130	2.47	25	
Carbon disulfide	ug/m3	11.7	9.56	9.71	81.9	83.2	70.0-130	1.62	25	
Carbon tetrachloride	ug/m3	23.6	22.4	22.7	94.7	96.3	70.0-130	1.68	25	
Chlorobenzene	ug/m3	17.3	17.6	17.7	101	102	70.0-130	0.525	25	
Chloroethane	ug/m3	9.89	9.07	9.18	91.7	92.8	70.0-130	1.16	25	
Chloroform	ug/m3	18.3	17.9	18.0	98.1	98.7	70.0-130	0.542	25	
Chloromethane	ug/m3	7.75	6.80	6.92	87.7	89.3	70.0-130	1.81	25	
2-Chlorotoluene	ug/m3	19.3	20.8	20.9	107	108	70.0-130	0.495	25	
Cyclohexane	ug/m3	12.9	13.8	14.1	107	109	70.0-130	1.73	25	
Dibromochloromethane	ug/m3	31.9	30.2	30.3	94.7	94.9	70.0-130	0.281	25	
1,2-Dibromoethane (EDB)	ug/m3	28.8	29.2	30.0	101	104	70.0-130	2.60	25	
1,2-Dichlorobenzene	ug/m3	22.5	24.2	24.6	107	109	70.0-130	1.73	25	
1,3-Dichlorobenzene	ug/m3	22.5	24.5	24.8	109	110	70.0-130	1.22	25	
1,4-Dichlorobenzene	ug/m3	22.5	25.1	25.4	111	113	70.0-130	0.952	25	
1,2-Dichloroethane	ug/m3	15.2	14.5	14.6	95.7	96.0	70.0-130	0.278	25	
1,1-Dichloroethane	ug/m3	15.0	14.5	14.7	96.5	97.9	70.0-130	1.37	25	
1,1-Dichloroethene	ug/m3	14.9	13.0	13.2	87.5	88.8	70.0-130	1.51	25	
cis-1,2-Dichloroethene	ug/m3	14.9	14.9	15.0	100	101	70.0-130	0.797	25	
trans-1,2-Dichloroethene	ug/m3	14.9	12.6	12.6	85.1	84.5	70.0-130	0.629	25	
1,2-Dichloropropane	ug/m3	17.3	16.4	16.8	94.7	97.1	70.0-130	2.50	25	
cis-1,3-Dichloropropene	ug/m3	17.0	17.1	17.3	100	102	70.0-130	1.32	25	
trans-1,3-Dichloropropene	ug/m3	17.0	17.4	17.5	102	103	70.0-130	0.521	25	
1,4-Dioxane (p-Dioxane)	ug/m3	13.5	14.6	14.5	108	107	70.0-140	0.496	25	
Ethanol	ug/m3	7.07	6.64	6.52	93.9	92.3	55.0-148	1.72	25	
Ethylbenzene	ug/m3	16.3	17.4	17.7	107	109	70.0-130	1.98	25	
Ethyl acetate	ug/m3	13.5	13.3	13.5	98.7	100	70.0-130	1.34	25	
4-Ethyltoluene	ug/m3	18.4	20.6	20.9	112	114	70.0-130	1.42	25	
Trichlorofluoromethane	ug/m3	21.1	20.3	20.6	96.3	97.9	70.0-130	1.65	25	
Dichlorodifluoromethane	ug/m3	18.5	17.1	17.3	92.3	93.3	64.0-139	1.15	25	
1,1,2-Trichlorotrifluoroethane	ug/m3	28.7	25.8	26.5	89.6	92.3	70.0-130	2.93	25	
Dichlorotetrafluoroethane	ug/m3	26.2	24.5	24.9	93.6	94.9	70.0-130	1.41	25	
n-Heptane	ug/m3	15.3	15.4	15.2	101	99.2	70.0-130	1.34	25	
Hexachloro-1,3-butadiene	ug/m3	40.0	42.0	41.1	105	103	70.0-151	2.06	25	
n-Hexane	ug/m3	13.2	13.5	13.8	102	105	70.0-130	2.06	25	
Isopropylbenzene (Cumene)	ug/m3	18.4	19.8	20.2	107	109	70.0-130	1.72	25	
Methylene Chloride	ug/m3	13.0	10.8	10.9	82.9	84.0	70.0-130	1.28	25	
2-Hexanone	ug/m3	15.3	16.2	16.4	105	107	70.0-149	1.76	25	
2-Butanone (MEK)	ug/m3	11.1	11.6	11.7	105	106	70.0-130	0.760	25	
4-Methyl-2-pentanone (MIBK)	ug/m3	15.4	15.5	15.6	101	102	70.0-139	0.788	25	
Methyl methacrylate	ug/m3	15.4	15.7	16.1	102	105	70.0-130	2.32	25	
Methyl-tert-butyl ether	ug/m3	13.5	14.8	15.0	109	111	70.0-130	1.21	25	
Naphthalene	ug/m3	19.6	22.3	22.2	114	113	70.0-159	0.235	25	
2-Propanol	ug/m3	9.22	9.05	9.19	98.1	99.7	70.0-139	1.62	25	
Propylene	ug/m3	6.46	6.56	6.56	102	102	64.0-144	0.00	25	
Styrene	ug/m3	16.0	18.0	18.4	113	115	70.0-130	2.11	25	
1,1,2,2-Tetrachloroethane	ug/m3	25.8	25.1	25.2	97.3	97.9	70.0-130	0.546	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: City of Bristol

Pace Project No.: 92710374

LABORATORY CONTROL SAMPLE & LCSD: R4026726-1			R4026726-2							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Tetrachloroethene	ug/m3	25.5	26.3	26.5	103	104	70.0-130	0.514	25	
Tetrahydrofuran	ug/m3	11.1	11.3	11.6	102	105	70.0-137	3.35	25	
Toluene	ug/m3	14.1	14.8	15.0	105	106	70.0-130	1.52	25	
1,2,4-Trichlorobenzene	ug/m3	27.8	33.1	32.7	119	118	70.0-160	1.12	25	
1,1,1-Trichloroethane	ug/m3	20.4	19.9	20.2	97.6	99.2	70.0-130	1.63	25	
1,1,2-Trichloroethane	ug/m3	20.4	20.2	20.4	99.2	100	70.0-130	0.803	25	
Trichloroethene	ug/m3	20.1	20.0	20.1	99.7	100	70.0-130	0.267	25	
1,2,4-Trimethylbenzene	ug/m3	18.4	20.4	20.6	111	112	70.0-130	0.957	25	
1,3,5-Trimethylbenzene	ug/m3	18.4	20.4	20.8	111	113	70.0-130	1.91	25	
2,2,4-Trimethylpentane	ug/m3	17.5	18.0	18.4	103	105	70.0-130	1.80	25	
Vinyl chloride	ug/m3	9.59	8.87	8.97	92.5	93.6	70.0-130	1.15	25	
Vinyl bromide	ug/m3	16.4	15.9	16.2	96.8	98.7	70.0-130	1.91	25	
Vinyl acetate	ug/m3	13.2	12.6	12.7	95.5	96.3	70.0-130	0.834	25	
m&p-Xylene	ug/m3	32.5	34.7	35.2	107	108	70.0-130	1.49	25	
o-Xylene	ug/m3	16.3	17.6	17.8	108	110	70.0-130	1.22	25	
Xylene (Total)	ug/m3	49.1	52.5	53.0	107	108	70.0-130	0.823	25	
4-Bromofluorobenzene (S)	%				99.4	98.9	60.0-140			

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: City of Bristol
Pace Project No.: 92710374

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.: 92710374

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92710374001	January 24 Hr Sample	TO-15	2213908	TO-15	2213908

REPORT OF LABORATORY ANALYSIS

Pace

Company Name:
Pace Analytical - Huntersville, NC

Street Address:

9800 Kinney Avenue, Suite 100
Huntersville, NC 28078

City, State Zip:

Customer Project #:

Project Name:

City of Bristol

Site Collection Info/Facility ID (as applicable):

PACE-POULSONVA 001

Time Zone Collected: 1 AM 1 PM 1 MT 1 CT 1 ET

Data Deliverables:

1 Level II 1 Level III 1 Level IV

1 ECUS

1 Other

Regulatory Program (CAA, RCRA, etc.) as applicable:

Permit # as applicable:

Run (Pre approval required):

2 Day 3 day 5 day Other

* 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

End Collection

Time

Time

Time

Time

Time

Time

Time

Time

January 24th Sample

04665 07749 1125/24 10:10 AM

284 445

Sample Receipt Checklist
COC Seal Present/Intact: ☒
COC Signed/Accurate: ☒
Bottles active/Intact: ☒
COC Act Bottles used: ☒
Tubing: ☒ Shunt: ☒
T/E: ☒

Customer Remarks / Special Conditions / Possible Hazards:
For Franklin D Cochran II - City of Bristol - Reporting through Pace-NC

Printed Name: Franklin D Cochran II
Signature: [Signature]

Additional Instructions from Pace®:

Correction factor (°C):
Obs. Temp. (°C):
Corrected Temp (°C):

Received by/Company (Signature): [Signature]

Date/Time: 1-24-24 10:35 AM

Received by/Company (Signature): [Signature]

Date/Time:

Received by/Company (Signature): [Signature]

Date/Time:

Received by/Company (Signature): [Signature]

W0#: 92710374

PM: EIDB

Due Date: 02/01/24

CLIENT: 92-BristolVA

W0#: 92710374

J087

Field Information

Canister

Pressure / Vacuum

Start Pressure / Vacuum

End Pressure / Vacuum

Duration

Flow Rate

Sampled Volume

TO-15 Summa

Analysis Requested

Pro Manager:

464 - Nancy McLean

Account / Client

PACE

Table #:

Profile / Template: T210823

Prelog / Bottle: P1042387

Ord ID:

W089228

Sample Comment

-01