

**ATTACHMENT 3
SAMPLING RESULTS
APRIL 2024 (24-HOUR SAMPLE)**





April 09, 2024

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

RE: Project: City of Bristol
Pace Project No.: 92723821

Dear David Cochran:

Enclosed are the analytical results for sample(s) received by the laboratory on April 05, 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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: City of Bristol
Pace Project No.: 92723821

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.: 92723821

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92723821001	April 24hr Sample	Air	04/04/24 10:57	04/05/24 09:00

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SAMPLE ANALYTE COUNT

Project: City of Bristol
Pace Project No.: 92723821

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92723821001	April 24hr Sample	TO-15	DAH	70	PAN

PAN = Pace National - Mt. Juliet

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SUMMARY OF DETECTION

Project: City of Bristol

Pace Project No.: 92723821

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92723821001	April 24hr Sample					
TO-15	Acetone	25.4	ug/m3	2.97	04/06/24 19:40	
TO-15	Carbon tetrachloride	0.492J	ug/m3	1.26	04/06/24 19:40	J
TO-15	Chloromethane	1.51	ug/m3	0.413	04/06/24 19:40	
TO-15	Ethanol	72.8	ug/m3	4.71	04/06/24 19:40	
TO-15	Trichlorofluoromethane	1.40	ug/m3	1.12	04/06/24 19:40	
TO-15	Dichlorodifluoromethane	2.31	ug/m3	0.989	04/06/24 19:40	
TO-15	1,1,2-Trichlorotrifluoroethane	0.638J	ug/m3	1.53	04/06/24 19:40	J
TO-15	Methylene Chloride	2.84	ug/m3	0.694	04/06/24 19:40	
TO-15	2-Butanone (MEK)	0.846J	ug/m3	3.69	04/06/24 19:40	J
TO-15	2-Propanol	6.17	ug/m3	3.07	04/06/24 19:40	
TO-15	Tetrachloroethene	0.754J	ug/m3	1.36	04/06/24 19:40	J
TO-15	Toluene	1.07J	ug/m3	1.88	04/06/24 19:40	J

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: City of Bristol
Pace Project No.: 92723821

Method: TO-15
Description: VOA (MS) TO-15
Client: City of Bristol VA
Date: April 09, 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.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: City of Bristol
Pace Project No.: 92723821

Sample: April 24hr Sample Lab ID: 92723821001 Collected: 04/04/24 10:57 Received: 04/05/24 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									
Acetone	25.4	ug/m3	2.97	1.39	1	04/06/24 19:40	04/06/24 19:40	67-64-1	
Allyl chloride	ND	ug/m3	0.626	0.357	1	04/06/24 19:40	04/06/24 19:40	107-05-1	
Benzene	ND	ug/m3	0.639	0.228	1	04/06/24 19:40	04/06/24 19:40	71-43-2	
Benzyl chloride	ND	ug/m3	1.04	0.311	1	04/06/24 19:40	04/06/24 19:40	100-44-7	
Bromodichloromethane	ND	ug/m3	1.34	0.471	1	04/06/24 19:40	04/06/24 19:40	75-27-4	
Bromoform	ND	ug/m3	6.21	0.757	1	04/06/24 19:40	04/06/24 19:40	75-25-2	
Bromomethane	ND	ug/m3	0.776	0.381	1	04/06/24 19:40	04/06/24 19:40	74-83-9	
1,3-Butadiene	ND	ug/m3	4.43	0.230	1	04/06/24 19:40	04/06/24 19:40	106-99-0	
Carbon disulfide	ND	ug/m3	0.622	0.317	1	04/06/24 19:40	04/06/24 19:40	75-15-0	
Carbon tetrachloride	0.492J	ug/m3	1.26	0.461	1	04/06/24 19:40	04/06/24 19:40	56-23-5	J
Chlorobenzene	ND	ug/m3	0.924	0.385	1	04/06/24 19:40	04/06/24 19:40	108-90-7	
Chloroethane	ND	ug/m3	0.528	0.263	1	04/06/24 19:40	04/06/24 19:40	75-00-3	
Chloroform	ND	ug/m3	0.973	0.349	1	04/06/24 19:40	04/06/24 19:40	67-66-3	
Chloromethane	1.51	ug/m3	0.413	0.213	1	04/06/24 19:40	04/06/24 19:40	74-87-3	
2-Chlorotoluene	ND	ug/m3	1.03	0.427	1	04/06/24 19:40	04/06/24 19:40	95-49-8	
Cyclohexane	ND	ug/m3	0.689	0.259	1	04/06/24 19:40	04/06/24 19:40	110-82-7	
Dibromochloromethane	ND	ug/m3	1.70	0.618	1	04/06/24 19:40	04/06/24 19:40	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.554	1	04/06/24 19:40	04/06/24 19:40	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.770	1	04/06/24 19:40	04/06/24 19:40	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.20	1.09	1	04/06/24 19:40	04/06/24 19:40	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	1.20	0.335	1	04/06/24 19:40	04/06/24 19:40	106-46-7	
1,2-Dichloroethane	ND	ug/m3	0.810	0.283	1	04/06/24 19:40	04/06/24 19:40	107-06-2	
1,1-Dichloroethane	ND	ug/m3	0.802	0.290	1	04/06/24 19:40	04/06/24 19:40	75-34-3	
1,1-Dichloroethene	ND	ug/m3	0.793	0.302	1	04/06/24 19:40	04/06/24 19:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	0.793	0.311	1	04/06/24 19:40	04/06/24 19:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.793	0.267	1	04/06/24 19:40	04/06/24 19:40	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.924	0.351	1	04/06/24 19:40	04/06/24 19:40	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.313	1	04/06/24 19:40	04/06/24 19:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.331	1	04/06/24 19:40	04/06/24 19:40	10061-02-6	
1,4-Dioxane (p-Dioxane)	ND	ug/m3	2.27	0.300	1	04/06/24 19:40	04/06/24 19:40	123-91-1	
Ethanol	72.8	ug/m3	4.71	0.500	1	04/06/24 19:40	04/06/24 19:40	64-17-5	
Ethylbenzene	ND	ug/m3	0.867	0.362	1	04/06/24 19:40	04/06/24 19:40	100-41-4	
Ethyl acetate	ND	ug/m3	2.27	0.360	1	04/06/24 19:40	04/06/24 19:40	141-78-6	
4-Ethyltoluene	ND	ug/m3	0.982	0.384	1	04/06/24 19:40	04/06/24 19:40	622-96-8	
Trichlorofluoromethane	1.40	ug/m3	1.12	0.460	1	04/06/24 19:40	04/06/24 19:40	75-69-4	
Dichlorodifluoromethane	2.31	ug/m3	0.989	0.678	1	04/06/24 19:40	04/06/24 19:40	75-71-8	
1,1,2-Trichlorotrifluoroethane	0.638J	ug/m3	1.53	0.608	1	04/06/24 19:40	04/06/24 19:40	76-13-1	J
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.622	1	04/06/24 19:40	04/06/24 19:40	76-14-2	
n-Heptane	ND	ug/m3	0.818	0.425	1	04/06/24 19:40	04/06/24 19:40	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	1.12	1	04/06/24 19:40	04/06/24 19:40	87-68-3	
n-Hexane	ND	ug/m3	2.22	0.726	1	04/06/24 19:40	04/06/24 19:40	110-54-3	
Isopropylbenzene (Cumene)	ND	ug/m3	0.983	0.382	1	04/06/24 19:40	04/06/24 19:40	98-82-8	
Methylene Chloride	2.84	ug/m3	0.694	0.340	1	04/06/24 19:40	04/06/24 19:40	75-09-2	
2-Hexanone	ND	ug/m3	5.11	0.544	1	04/06/24 19:40	04/06/24 19:40	591-78-6	
2-Butanone (MEK)	0.846J	ug/m3	3.69	0.240	1	04/06/24 19:40	04/06/24 19:40	78-93-3	J

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: City of Bristol
Pace Project No.: 92723821

Sample: April 24hr Sample Lab ID: 92723821001 Collected: 04/04/24 10:57 Received: 04/05/24 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									
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	5.12	0.313	1	04/06/24 19:40	04/06/24 19:40	108-10-1	
Methyl methacrylate	ND	ug/m3	0.819	0.359	1	04/06/24 19:40	04/06/24 19:40	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.233	1	04/06/24 19:40	04/06/24 19:40	1634-04-4	
Naphthalene	ND	ug/m3	3.30	1.83	1	04/06/24 19:40	04/06/24 19:40	91-20-3	
2-Propanol	6.17	ug/m3	3.07	0.649	1	04/06/24 19:40	04/06/24 19:40	67-63-0	
Propylene	ND	ug/m3	2.15	0.160	1	04/06/24 19:40	04/06/24 19:40	115-07-1	
Styrene	ND	ug/m3	0.851	0.335	1	04/06/24 19:40	04/06/24 19:40	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.511	1	04/06/24 19:40	04/06/24 19:40	79-34-5	
Tetrachloroethene	0.754J	ug/m3	1.36	0.553	1	04/06/24 19:40	04/06/24 19:40	127-18-4	J
Tetrahydrofuran	ND	ug/m3	0.590	0.216	1	04/06/24 19:40	04/06/24 19:40	109-99-9	
Toluene	1.07J	ug/m3	1.88	0.328	1	04/06/24 19:40	04/06/24 19:40	108-88-3	J
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	1.10	1	04/06/24 19:40	04/06/24 19:40	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.400	1	04/06/24 19:40	04/06/24 19:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.422	1	04/06/24 19:40	04/06/24 19:40	79-00-5	
Trichloroethene	ND	ug/m3	1.07	0.364	1	04/06/24 19:40	04/06/24 19:40	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	0.982	0.375	1	04/06/24 19:40	04/06/24 19:40	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	0.982	0.382	1	04/06/24 19:40	04/06/24 19:40	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	0.934	0.621	1	04/06/24 19:40	04/06/24 19:40	540-84-1	
Vinyl chloride	ND	ug/m3	0.511	0.243	1	04/06/24 19:40	04/06/24 19:40	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.373	1	04/06/24 19:40	04/06/24 19:40	593-60-2	
Vinyl acetate	ND	ug/m3	2.22	0.408	1	04/06/24 19:40	04/06/24 19:40	108-05-4	
m&p-Xylene	ND	ug/m3	1.73	0.585	1	04/06/24 19:40	04/06/24 19:40	179601-23-1	
o-Xylene	ND	ug/m3	0.867	0.359	1	04/06/24 19:40	04/06/24 19:40	95-47-6	
Xylene (Total)	ND	ug/m3	2.61	0.586	1	04/06/24 19:40	04/06/24 19:40	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96.1	%	60.0-140		1	04/06/24 19:40	04/06/24 19:40	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: City of Bristol
Pace Project No.: 92723821

QC Batch: 2261820 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: VOA (MS) TO-15
Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 92723821001

METHOD BLANK: R4055338-3 Matrix: Air
Associated Lab Samples: 92723821001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Acetone	ug/m3	ND	2.97	1.39	04/06/24 11:40	
Allyl chloride	ug/m3	ND	0.626	0.357	04/06/24 11:40	
Benzene	ug/m3	ND	0.639	0.228	04/06/24 11:40	
Benzyl chloride	ug/m3	ND	1.04	0.311	04/06/24 11:40	
Bromodichloromethane	ug/m3	ND	1.34	0.471	04/06/24 11:40	
Bromoform	ug/m3	ND	6.21	0.757	04/06/24 11:40	
Bromomethane	ug/m3	ND	0.776	0.381	04/06/24 11:40	
1,3-Butadiene	ug/m3	ND	4.43	0.230	04/06/24 11:40	
Carbon disulfide	ug/m3	0.417J	0.622	0.317	04/06/24 11:40	J
Carbon tetrachloride	ug/m3	ND	1.26	0.461	04/06/24 11:40	
Chlorobenzene	ug/m3	ND	0.924	0.385	04/06/24 11:40	
Chloroethane	ug/m3	ND	0.528	0.263	04/06/24 11:40	
Chloroform	ug/m3	ND	0.973	0.349	04/06/24 11:40	
Chloromethane	ug/m3	ND	0.413	0.213	04/06/24 11:40	
2-Chlorotoluene	ug/m3	ND	1.03	0.427	04/06/24 11:40	
Cyclohexane	ug/m3	ND	0.689	0.259	04/06/24 11:40	
Dibromochloromethane	ug/m3	ND	1.70	0.618	04/06/24 11:40	
1,2-Dibromoethane (EDB)	ug/m3	ND	1.54	0.554	04/06/24 11:40	
1,2-Dichlorobenzene	ug/m3	ND	1.20	0.770	04/06/24 11:40	
1,3-Dichlorobenzene	ug/m3	ND	1.20	1.09	04/06/24 11:40	
1,4-Dichlorobenzene	ug/m3	ND	1.20	0.335	04/06/24 11:40	
1,2-Dichloroethane	ug/m3	ND	0.810	0.283	04/06/24 11:40	
1,1-Dichloroethane	ug/m3	ND	0.802	0.290	04/06/24 11:40	
1,1-Dichloroethene	ug/m3	ND	0.793	0.302	04/06/24 11:40	
cis-1,2-Dichloroethene	ug/m3	ND	0.793	0.311	04/06/24 11:40	
trans-1,2-Dichloroethene	ug/m3	ND	0.793	0.267	04/06/24 11:40	
1,2-Dichloropropane	ug/m3	ND	0.924	0.351	04/06/24 11:40	
cis-1,3-Dichloropropene	ug/m3	ND	0.908	0.313	04/06/24 11:40	
trans-1,3-Dichloropropene	ug/m3	ND	0.908	0.331	04/06/24 11:40	
1,4-Dioxane (p-Dioxane)	ug/m3	ND	2.27	0.300	04/06/24 11:40	
Ethanol	ug/m3	1.08J	4.71	0.500	04/06/24 11:40	J
Ethylbenzene	ug/m3	ND	0.867	0.362	04/06/24 11:40	
Ethyl acetate	ug/m3	ND	2.27	0.360	04/06/24 11:40	
4-Ethyltoluene	ug/m3	ND	0.982	0.384	04/06/24 11:40	
Trichlorofluoromethane	ug/m3	ND	1.12	0.460	04/06/24 11:40	
Dichlorodifluoromethane	ug/m3	ND	0.989	0.678	04/06/24 11:40	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	1.53	0.608	04/06/24 11:40	
Dichlorotetrafluoroethane	ug/m3	ND	1.40	0.622	04/06/24 11:40	
n-Heptane	ug/m3	ND	0.818	0.425	04/06/24 11:40	
Hexachloro-1,3-butadiene	ug/m3	ND	6.73	1.12	04/06/24 11:40	

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.: 92723821

METHOD BLANK: R4055338-3

Matrix: Air

Associated Lab Samples: 92723821001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
n-Hexane	ug/m3	ND	2.22	0.726	04/06/24 11:40	
Isopropylbenzene (Cumene)	ug/m3	ND	0.983	0.382	04/06/24 11:40	
Methylene Chloride	ug/m3	ND	0.694	0.340	04/06/24 11:40	
2-Hexanone	ug/m3	ND	5.11	0.544	04/06/24 11:40	
2-Butanone (MEK)	ug/m3	ND	3.69	0.240	04/06/24 11:40	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	5.12	0.313	04/06/24 11:40	
Methyl methacrylate	ug/m3	ND	0.819	0.359	04/06/24 11:40	
Methyl-tert-butyl ether	ug/m3	ND	0.721	0.233	04/06/24 11:40	
Naphthalene	ug/m3	ND	3.30	1.83	04/06/24 11:40	
2-Propanol	ug/m3	ND	3.07	0.649	04/06/24 11:40	
Propylene	ug/m3	ND	2.15	0.160	04/06/24 11:40	
Styrene	ug/m3	ND	0.851	0.335	04/06/24 11:40	
1,1,2,2-Tetrachloroethane	ug/m3	ND	1.37	0.511	04/06/24 11:40	
Tetrachloroethene	ug/m3	ND	1.36	0.553	04/06/24 11:40	
Tetrahydrofuran	ug/m3	ND	0.590	0.216	04/06/24 11:40	
Toluene	ug/m3	ND	1.88	0.328	04/06/24 11:40	
1,2,4-Trichlorobenzene	ug/m3	ND	4.66	1.10	04/06/24 11:40	
1,1,1-Trichloroethane	ug/m3	ND	1.09	0.400	04/06/24 11:40	
1,1,2-Trichloroethane	ug/m3	ND	1.09	0.422	04/06/24 11:40	
Trichloroethene	ug/m3	ND	1.07	0.364	04/06/24 11:40	
1,2,4-Trimethylbenzene	ug/m3	ND	0.982	0.375	04/06/24 11:40	
1,3,5-Trimethylbenzene	ug/m3	ND	0.982	0.382	04/06/24 11:40	
2,2,4-Trimethylpentane	ug/m3	ND	0.934	0.621	04/06/24 11:40	
Vinyl chloride	ug/m3	ND	0.511	0.243	04/06/24 11:40	
Vinyl bromide	ug/m3	ND	0.875	0.373	04/06/24 11:40	
Vinyl acetate	ug/m3	ND	2.22	0.408	04/06/24 11:40	
m&p-Xylene	ug/m3	ND	1.73	0.585	04/06/24 11:40	
o-Xylene	ug/m3	ND	0.867	0.359	04/06/24 11:40	
Xylene (Total)	ug/m3	ND	2.61	0.586	04/06/24 11:40	
4-Bromofluorobenzene (S)	%	96.9	60.0-140		04/06/24 11:40	

LABORATORY CONTROL SAMPLE & LCSD: R4055338-1

R4055338-2

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Acetone	ug/m3	3.75	10.2	10.5	115	117	70.0-130	2.30	25	
Allyl chloride	ug/m3	3.75	13.2	13.9	113	118	70.0-130	4.84	25	
Benzene	ug/m3	3.75	14.1	14.4	117	120	70.0-130	2.25	25	
Benzyl chloride	ug/m3	3.75	22.8	23.5	117	121	70.0-152	3.14	25	
Bromodichloromethane	ug/m3	3.75	28.9	30.0	115	119	70.0-130	3.64	25	
Bromoform	ug/m3	3.75	46.4	47.4	119	122	70.0-130	2.21	25	
Bromomethane	ug/m3	3.75	14.2	15.1	97.9	104	70.0-130	6.08	25	
1,3-Butadiene	ug/m3	3.75	8.43	8.63	102	104	70.0-130	2.33	25	
Carbon disulfide	ug/m3	3.75	13.2	13.3	113	114	70.0-130	0.939	25	
Carbon tetrachloride	ug/m3	3.75	26.0	27.1	110	115	70.0-130	4.03	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: City of Bristol
Pace Project No.: 92723821

LABORATORY CONTROL SAMPLE & LCSD: R4055338-1			R4055338-2				% Rec Limits	RPD	Max RPD	Qualifiers
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec				
Chlorobenzene	ug/m3	3.75	20.1	20.7	116	119	70.0-130	3.17	25	
Chloroethane	ug/m3	3.75	10.8	11.2	109	113	70.0-130	3.60	25	
Chloroform	ug/m3	3.75	20.8	21.7	114	119	70.0-130	3.89	25	
Chloromethane	ug/m3	3.75	9.09	9.38	117	121	70.0-130	3.13	25	
2-Chlorotoluene	ug/m3	3.75	21.9	23.1	113	120	70.0-130	5.73	25	
Cyclohexane	ug/m3	3.75	15.3	15.6	118	121	70.0-130	2.01	25	
Dibromochloromethane	ug/m3	3.75	36.8	37.9	115	119	70.0-130	2.73	25	
1,2-Dibromoethane (EDB)	ug/m3	3.75	33.7	34.2	117	119	70.0-130	1.59	25	
1,2-Dichlorobenzene	ug/m3	3.75	26.8	27.1	119	120	70.0-130	1.11	25	
1,3-Dichlorobenzene	ug/m3	3.75	25.7	26.6	114	118	70.0-130	3.44	25	
1,4-Dichlorobenzene	ug/m3	3.75	26.3	27.0	117	120	70.0-130	2.48	25	
1,2-Dichloroethane	ug/m3	3.75	16.9	17.3	111	114	70.0-130	2.37	25	
1,1-Dichloroethane	ug/m3	3.75	17.2	17.8	114	118	70.0-130	3.67	25	
1,1-Dichloroethene	ug/m3	3.75	16.6	17.4	111	117	70.0-130	4.90	25	
cis-1,2-Dichloroethene	ug/m3	3.75	17.5	17.8	118	120	70.0-130	1.80	25	
trans-1,2-Dichloroethene	ug/m3	3.75	16.7	17.4	112	117	70.0-130	3.96	25	
1,2-Dichloropropane	ug/m3	3.75	20.9	21.6	121	125	70.0-130	3.48	25	
cis-1,3-Dichloropropene	ug/m3	3.75	20.2	20.5	118	120	70.0-130	1.56	25	
trans-1,3-Dichloropropene	ug/m3	3.75	19.8	20.5	117	120	70.0-130	3.15	25	
1,4-Dioxane (p-Dioxane)	ug/m3	3.75	16.2	16.6	120	123	70.0-140	2.20	25	
Ethanol	ug/m3	3.75	7.47	7.94	106	112	55.0-148	6.12	25	
Ethylbenzene	ug/m3	3.75	19.3	19.9	119	123	70.0-130	3.09	25	
Ethyl acetate	ug/m3	3.75	17.0	16.9	126	125	70.0-130	0.213	25	
4-Ethyltoluene	ug/m3	3.75	20.9	21.6	114	118	70.0-130	3.46	25	
Trichlorofluoromethane	ug/m3	3.75	23.4	23.8	111	113	70.0-130	1.66	25	
Dichlorodifluoromethane	ug/m3	3.75	20.3	20.8	110	112	64.0-139	2.17	25	
1,1,2-Trichlorotrifluoroethane	ug/m3	3.75	32.3	33.3	113	116	70.0-130	2.80	25	
Dichlorotetrafluoroethane	ug/m3	3.75	30.8	31.3	118	119	70.0-130	1.57	25	
n-Heptane	ug/m3	3.75	18.3	19.1	119	125	70.0-130	4.15	25	
Hexachloro-1,3-butadiene	ug/m3	3.75	47.7	49.2	119	123	70.0-151	3.08	25	
n-Hexane	ug/m3	3.75	15.3	15.6	116	118	70.0-130	1.82	25	
Isopropylbenzene (Cumene)	ug/m3	3.75	21.3	22.3	116	121	70.0-130	4.28	25	
Methylene Chloride	ug/m3	3.75	14.1	14.4	109	111	70.0-130	1.95	25	
2-Hexanone	ug/m3	3.75	17.7	18.2	115	119	70.0-149	3.19	25	
2-Butanone (MEK)	ug/m3	3.75	13.4	13.8	122	125	70.0-130	2.60	25	
4-Methyl-2-pentanone (MIBK)	ug/m3	3.75	17.9	18.5	117	121	70.0-139	3.37	25	
Methyl methacrylate	ug/m3	3.75	17.7	18.6	115	121	70.0-130	4.74	25	
Methyl-tert-butyl ether	ug/m3	3.75	15.3	15.6	114	115	70.0-130	1.40	25	
Naphthalene	ug/m3	3.75	24.5	25.4	125	130	70.0-159	3.77	25	
2-Propanol	ug/m3	3.75	9.88	10.1	107	109	70.0-139	1.97	25	
Propylene	ug/m3	3.75	7.20	7.52	111	117	64.0-144	4.44	25	
Styrene	ug/m3	3.75	18.6	19.1	117	120	70.0-130	2.70	25	
1,1,2,2-Tetrachloroethane	ug/m3	3.75	29.3	30.4	114	118	70.0-130	3.69	25	
Tetrachloroethene	ug/m3	3.75	30.0	30.4	118	119	70.0-130	1.35	25	
Tetrahydrofuran	ug/m3	3.75	12.9	12.9	117	117	70.0-137	0.457	25	
Toluene	ug/m3	3.75	16.5	17.0	117	120	70.0-130	2.70	25	
1,2,4-Trichlorobenzene	ug/m3	3.75	33.6	34.6	121	125	70.0-160	2.82	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: City of Bristol

Pace Project No.: 92723821

LABORATORY CONTROL SAMPLE & LCSD: R4055338-1			R4055338-2							
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	22.7	23.3	111	114	70.0-130	2.84	25	
1,1,2-Trichloroethane	ug/m3	3.75	24.4	25.0	119	123	70.0-130	2.64	25	
Trichloroethene	ug/m3	3.75	23.5	24.5	117	122	70.0-130	4.02	25	
1,2,4-Trimethylbenzene	ug/m3	3.75	21.0	21.5	114	117	70.0-130	2.31	25	
1,3,5-Trimethylbenzene	ug/m3	3.75	20.4	21.2	111	115	70.0-130	3.78	25	
2,2,4-Trimethylpentane	ug/m3	3.75	20.6	21.1	117	121	70.0-130	2.69	25	
Vinyl chloride	ug/m3	3.75	10.1	10.4	105	108	70.0-130	3.00	25	
Vinyl bromide	ug/m3	3.75	18.8	19.6	115	119	70.0-130	4.10	25	
Vinyl acetate	ug/m3	3.75	16.0	15.4	121	117	70.0-130	3.60	25	
m&p-Xylene	ug/m3	7.50	39.0	40.2	120	124	70.0-130	2.96	25	
o-Xylene	ug/m3	3.75	19.0	19.6	117	121	70.0-130	3.14	25	
Xylene (Total)	ug/m3	11.3	58.2	59.9	119	122	70.0-130	2.94	25	
4-Bromofluorobenzene (S)	%				94.8	96.0	60.0-140			

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QUALIFIERS

Project: City of Bristol
Pace Project No.: 92723821

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: City of Bristol
Pace Project No.: 92723821

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92723821001	April 24hr Sample	TO-15	2261820	TO-15	2261820

REPORT OF LABORATORY ANALYSIS

Pace® Location Requested (City/State):		Air CHAIN-OF-CUSTODY Analytical Record Document Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields												
Company Name: Pace Analytical - Huntersville, NC		Contact/Report To: Eben Buchanan												
Street Address: 9800 Kinsey Avenue, Suite 100 Huntersville, NC 28078		Phone #: 704-875-9092												
City, State Zip:		E-Mail: eben.buchanan@pacelabs.com												
Customer Project #:		Cc E-Mail:												
Project Name: City of Bristol		Invoice to: David Cochran II												
Site Collection Info/Facility ID (as applicable): PACE-POULSONVA 001		Invoice E-Mail: dcochran@bristolva.org												
Time Zone Collected: [] AK [] PT [] MT [] CT [x] ET		Purchase Order # (if applicable):												
		Quote #:												
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												
* 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 Time		End Collection Date Time		Canister Pressure / Vacuum	PUF / FILTER		TO-15 Summa	Analyses Requested	Proj. Manager: 464 - Nancy McLain	
				Date	Time	Date	Time	Vacuum (in Hg)	Vacuum (in Hg)	Duration (minutes)			Flow Rate m³/min or L/min	Total Volume Sampled m³ or L
April 24hr Sample		019063	024362	4/3/24	10:32am	4/4/24	10:52am	30	6				TU 4/2/24	
													Table #: U72569	
													Profile / Template: T210823	
													Prelog / Bottle Ord. ID: P1061047	
													Sample Comment -0	
													-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: <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)				Date/Time: Tracking Number:						
Relinquished by/Company: (Signature)				Received by/Company: (Signature)				Date/Time: Delivered by: In-Person Courier						
Relinquished by/Company: (Signature)				Received by/Company: (Signature)				Date/Time: 4/5/24 0900 FedEX UPS Other						
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/				Received by/Company: (Signature)				Date/Time: Cont-l Arb Page: ____ of: ____						

Pace Analytical - Huntersville, NC

Sample Delivery Group: L1722569
Samples Received: 04/05/2024
Project Number: 92723821
Description: City of Bristol
Site: 001
Report To: Eben Buchanan
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078

Entire Report Reviewed By:



Nancy McLain
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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		⁹ Sc

SAMPLE SUMMARY

APRIL 24HR SAMPLE L1722569-01 Air

Collected by
Franklin D C

Collected date/time
04/04/24 10:57

Received date/time
04/05/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2261820	1	04/06/24 19:40	04/06/24 19:40	DAH	Mt. Juliet, TN

¹Cp ${}^2\text{Tc}$ 3S_s ${}^4\text{Cn}$ ^5Sr ${}^6\text{Qc}$ ${}^7\text{Gf}$ ${}^8\text{Al}$ ${}^9\text{Sc}$

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Nancy McLain
Project Manager



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL ug/m3	RDL ug/m3	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.39	2.97	25.4		1	WG2261820
Allyl chloride	107-05-1	76.53	0.357	0.626	U		1	WG2261820
Benzene	71-43-2	78.10	0.228	0.639	U		1	WG2261820
Benzyl Chloride	100-44-7	127	0.311	1.04	U		1	WG2261820
Bromodichloromethane	75-27-4	164	0.471	1.34	U		1	WG2261820
Bromoform	75-25-2	253	0.757	6.21	U		1	WG2261820
Bromomethane	74-83-9	94.90	0.381	0.776	U		1	WG2261820
1,3-Butadiene	106-99-0	54.10	0.230	4.43	U		1	WG2261820
Carbon disulfide	75-15-0	76.10	0.317	0.622	U		1	WG2261820
Carbon tetrachloride	56-23-5	154	0.461	1.26	0.492	J	1	WG2261820
Chlorobenzene	108-90-7	113	0.385	0.924	U		1	WG2261820
Chloroethane	75-00-3	64.50	0.263	0.528	U		1	WG2261820
Chloroform	67-66-3	119	0.349	0.973	U		1	WG2261820
Chloromethane	74-87-3	50.50	0.213	0.413	1.51		1	WG2261820
2-Chlorotoluene	95-49-8	126	0.427	1.03	U		1	WG2261820
Cyclohexane	110-82-7	84.20	0.259	0.689	U		1	WG2261820
Dibromochloromethane	124-48-1	208	0.618	1.70	U		1	WG2261820
1,2-Dibromoethane	106-93-4	188	0.554	1.54	U		1	WG2261820
1,2-Dichlorobenzene	95-50-1	147	0.770	1.20	U		1	WG2261820
1,3-Dichlorobenzene	541-73-1	147	1.09	1.20	U		1	WG2261820
1,4-Dichlorobenzene	106-46-7	147	0.335	1.20	U		1	WG2261820
1,2-Dichloroethane	107-06-2	99	0.283	0.810	U		1	WG2261820
1,1-Dichloroethane	75-34-3	98	0.290	0.802	U		1	WG2261820
1,1-Dichloroethene	75-35-4	96.90	0.302	0.793	U		1	WG2261820
cis-1,2-Dichloroethene	156-59-2	96.90	0.311	0.793	U		1	WG2261820
trans-1,2-Dichloroethene	156-60-5	96.90	0.267	0.793	U		1	WG2261820
1,2-Dichloropropane	78-87-5	113	0.351	0.924	U		1	WG2261820
cis-1,3-Dichloropropene	10061-01-5	111	0.313	0.908	U		1	WG2261820
trans-1,3-Dichloropropene	10061-02-6	111	0.331	0.908	U		1	WG2261820
1,4-Dioxane	123-91-1	88.10	0.300	2.27	U		1	WG2261820
Ethanol	64-17-5	46.10	0.500	4.71	72.8		1	WG2261820
Ethylbenzene	100-41-4	106	0.362	0.867	U		1	WG2261820
Ethyl acetate	141-78-6	88	0.360	2.27	U		1	WG2261820
4-Ethyltoluene	622-96-8	120	0.384	0.982	U		1	WG2261820
Trichlorofluoromethane	75-69-4	137.40	0.460	1.12	1.40		1	WG2261820
Dichlorodifluoromethane	75-71-8	120.92	0.678	0.989	2.31		1	WG2261820
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.608	1.53	0.638	J	1	WG2261820
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.622	1.40	U		1	WG2261820
Heptane	142-82-5	100	0.425	0.818	U		1	WG2261820
Hexachloro-1,3-butadiene	87-68-3	261	1.12	6.73	U		1	WG2261820
n-Hexane	110-54-3	86.20	0.726	2.22	U		1	WG2261820
Isopropylbenzene	98-82-8	120.20	0.382	0.983	U		1	WG2261820
Methylene Chloride	75-09-2	84.90	0.340	0.694	2.84		1	WG2261820
Methyl Butyl Ketone	591-78-6	100	0.544	5.11	U		1	WG2261820
2-Butanone (MEK)	78-93-3	72.10	0.240	3.69	0.846	J	1	WG2261820
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	0.313	5.12	U		1	WG2261820
Methyl methacrylate	80-62-6	100.12	0.359	0.819	U		1	WG2261820
MTBE	1634-04-4	88.10	0.233	0.721	U		1	WG2261820
Naphthalene	91-20-3	128	1.83	3.30	U		1	WG2261820
2-Propanol	67-63-0	60.10	0.649	3.07	6.17		1	WG2261820
Propene	115-07-1	42.10	0.160	2.15	U		1	WG2261820
Styrene	100-42-5	104	0.335	0.851	U		1	WG2261820
1,1,2,2-Tetrachloroethane	79-34-5	168	0.511	1.37	U		1	WG2261820
Tetrachloroethylene	127-18-4	166	0.553	1.36	0.754	J	1	WG2261820
Tetrahydrofuran	109-99-9	72.10	0.216	0.590	U		1	WG2261820
Toluene	108-88-3	92.10	0.328	1.88	1.07	J	1	WG2261820

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL ug/m3	RDL ug/m3	Result ug/m3	Qualifier	Dilution	Batch
1,2,4-Trichlorobenzene	120-82-1	181	1.10	4.66	U		1	WG2261820
1,1,1-Trichloroethane	71-55-6	133	0.400	1.09	U		1	WG2261820
1,1,2-Trichloroethane	79-00-5	133	0.422	1.09	U		1	WG2261820
Trichloroethylene	79-01-6	131	0.364	1.07	U		1	WG2261820
1,2,4-Trimethylbenzene	95-63-6	120	0.375	0.982	U		1	WG2261820
1,3,5-Trimethylbenzene	108-67-8	120	0.382	0.982	U		1	WG2261820
2,2,4-Trimethylpentane	540-84-1	114.22	0.621	0.934	U		1	WG2261820
Vinyl chloride	75-01-4	62.50	0.243	0.511	U		1	WG2261820
Vinyl Bromide	593-60-2	106.95	0.373	0.875	U		1	WG2261820
Vinyl acetate	108-05-4	86.10	0.408	2.22	U		1	WG2261820
m&p-Xylene	179601-23-1	106	0.585	1.73	U		1	WG2261820
o-Xylene	95-47-6	106	0.359	0.867	U		1	WG2261820
Xylenes, Total	1330-20-7	106.16	0.586	2.61	U		1	WG2261820
(S) 1,4-Bromofluorobenzene	460-00-4	175			96.1		60.0-140	WG2261820

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc

Method Blank (MB)

(MB) R4055338-3 04/06/24 11:40

Analyte	MB Result ug/m3	MB Qualifier	MB MDL ug/m3	MB RDL ug/m3
Acetone	U		1.39	2.97
Allyl chloride	U		0.357	0.626
Benzene	U		0.228	0.639
Benzyl Chloride	U		0.311	1.04
Bromodichloromethane	U		0.471	1.34
Bromoform	U		0.757	6.21
Bromomethane	U		0.381	0.776
1,3-Butadiene	U		0.230	4.43
Carbon disulfide	0.417	U	0.317	0.622
Carbon tetrachloride	U		0.461	1.26
Chlorobenzene	U		0.385	0.924
Chloroethane	U		0.263	0.528
Chloroform	U		0.349	0.973
Chloromethane	U		0.213	0.413
2-Chlorotoluene	U		0.427	1.03
Cyclohexane	U		0.259	0.689
Dibromochloromethane	U		0.618	1.70
1,2-Dibromoethane	U		0.554	1.54
1,2-Dichlorobenzene	U		0.770	1.20
1,3-Dichlorobenzene	U		1.09	1.20
1,4-Dichlorobenzene	U		0.335	1.20
1,2-Dichloroethane	U		0.283	0.810
1,1-Dichloroethane	U		0.290	0.802
1,1-Dichloroethene	U		0.302	0.793
cis-1,2-Dichloroethene	U		0.311	0.793
trans-1,2-Dichloroethene	U		0.267	0.793
1,2-Dichloropropane	U		0.351	0.924
cis-1,3-Dichloropropene	U		0.313	0.908
trans-1,3-Dichloropropene	U		0.331	0.908
1,4-Dioxane	U		0.300	2.27
Ethanol	1.08	U	0.500	4.71
Ethylbenzene	U		0.362	0.867
Ethyl acetate	U		0.360	2.27
4-Ethyltoluene	U		0.384	0.982
Trichlorofluoromethane	U		0.460	1.12
Dichlorodifluoromethane	U		0.678	0.989
1,1,2-Trichlorotrifluoroethane	U		0.608	1.53
1,2-Dichlorotetrafluoroethane	U		0.622	1.40
Heptane	U		0.425	0.818
Hexachloro-1,3-butadiene	U		1.12	6.73

1Cp

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Method Blank (MB)

(MB) R4055338-3 04/06/24 11:40

Analyte	MB Result ug/m3	MB Qualifier	MB MDL ug/m3	MB RDL ug/m3
n-Hexane	U		0.726	2.22
Isopropylbenzene	U		0.382	0.983
Methylene Chloride	U		0.340	0.694
Methyl Butyl Ketone	U		0.544	5.11
2-Butanone (MEK)	U		0.240	3.69
4-Methyl-2-pentanone (MIBK)	U		0.313	5.12
Methyl methacrylate	U		0.359	0.819
MTBE	U		0.233	0.721
Naphthalene	U		1.83	3.30
2-Propanol	U		0.649	3.07
Propene	U		0.160	2.15
Styrene	U		0.335	0.851
1,1,2,2-Tetrachloroethane	U		0.511	1.37
Tetrachloroethylene	U		0.553	1.36
Tetrahydrofuran	U		0.216	0.590
Toluene	U		0.328	1.88
1,2,4-Trichlorobenzene	U		1.10	4.66
1,1,1-Trichloroethane	U		0.400	1.09
1,1,2-Trichloroethane	U		0.422	1.09
Trichloroethylene	U		0.364	1.07
1,2,4-Trimethylbenzene	U		0.375	0.982
1,3,5-Trimethylbenzene	U		0.382	0.982
2,2,4-Trimethylpentane	U		0.621	0.934
Vinyl chloride	U		0.243	0.511
Vinyl Bromide	U		0.373	0.875
Vinyl acetate	U		0.408	2.22
m&p-Xylene	U		0.585	1.73
o-Xylene	U		0.359	0.867
Xylenes, Total	U		0.586	2.61
(S) 1,4-Bromofluorobenzene	96.9			60.0-140

1Cp

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8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4055338-1 04/06/24 07:25 • (LCSD) R4055338-2 04/06/24 08:04

Analyte	Spike Amount ug/m3	LCS Result ug/m3	LCSD Result ug/m3	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	8.91	10.2	10.5	115	117	70.0-130			2.30	25
Allyl chloride	11.7	13.2	13.9	113	118	70.0-130			4.84	25
Benzene	12.0	14.1	14.4	117	120	70.0-130			2.25	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4055338-1 04/06/24 07:25 • (LCSD) R4055338-2 04/06/24 08:04

Analyte	Spike Amount ug/m3	LCS Result ug/m3	LCSD Result ug/m3	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzyl Chloride	19.5	22.8	23.5	117	121	70.0-152			3.14	25
Bromodichloromethane	25.2	28.9	30.0	115	119	70.0-130			3.64	25
Bromoform	38.8	46.4	47.4	119	122	70.0-130			2.21	25
Bromomethane	14.6	14.2	15.1	97.9	104	70.0-130			6.08	25
1,3-Butadiene	8.30	8.43	8.63	102	104	70.0-130			2.33	25
Carbon disulfide	11.7	13.2	13.3	113	114	70.0-130			0.939	25
Carbon tetrachloride	23.6	26.0	27.1	110	115	70.0-130			4.03	25
Chlorobenzene	17.3	20.1	20.7	116	119	70.0-130			3.17	25
Chloroethane	9.89	10.8	11.2	109	113	70.0-130			3.60	25
Chloroform	18.3	20.8	21.7	114	119	70.0-130			3.89	25
Chloromethane	7.75	9.09	9.38	117	121	70.0-130			3.13	25
2-Chlorotoluene	19.3	21.9	23.1	113	120	70.0-130			5.73	25
Cyclohexane	12.9	15.3	15.6	118	121	70.0-130			2.01	25
Dibromochloromethane	31.9	36.8	37.9	115	119	70.0-130			2.73	25
1,2-Dibromoethane	28.8	33.7	34.2	117	119	70.0-130			1.59	25
1,2-Dichlorobenzene	22.5	26.8	27.1	119	120	70.0-130			1.11	25
1,3-Dichlorobenzene	22.5	25.7	26.6	114	118	70.0-130			3.44	25
1,4-Dichlorobenzene	22.5	26.3	27.0	117	120	70.0-130			2.48	25
1,2-Dichloroethane	15.2	16.9	17.3	111	114	70.0-130			2.37	25
1,1-Dichloroethane	15.0	17.2	17.8	114	118	70.0-130			3.67	25
1,1-Dichloroethene	14.9	16.6	17.4	111	117	70.0-130			4.90	25
cis-1,2-Dichloroethene	14.9	17.5	17.8	118	120	70.0-130			1.80	25
trans-1,2-Dichloroethene	14.9	16.7	17.4	112	117	70.0-130			3.96	25
1,2-Dichloropropane	17.3	20.9	21.6	121	125	70.0-130			3.48	25
cis-1,3-Dichloropropene	17.0	20.2	20.5	118	120	70.0-130			1.56	25
trans-1,3-Dichloropropene	17.0	19.8	20.5	117	120	70.0-130			3.15	25
1,4-Dioxane	13.5	16.2	16.6	120	123	70.0-140			2.20	25
Ethanol	7.07	7.47	7.94	106	112	55.0-148			6.12	25
Ethylbenzene	16.3	19.3	19.9	119	123	70.0-130			3.09	25
Ethyl acetate	13.5	17.0	16.9	126	125	70.0-130			0.213	25
4-Ethyltoluene	18.4	20.9	21.6	114	118	70.0-130			3.46	25
Trichlorofluoromethane	21.1	23.4	23.8	111	113	70.0-130			1.66	25
Dichlorodifluoromethane	18.5	20.3	20.8	110	112	64.0-139			2.17	25
1,1,2-Trichlorotrifluoroethane	28.7	32.3	33.3	113	116	70.0-130			2.80	25
1,2-Dichlorotetrafluoroethane	26.2	30.8	31.3	118	119	70.0-130			1.57	25
Heptane	15.3	18.3	19.1	119	125	70.0-130			4.15	25
Hexachloro-1,3-butadiene	40.0	47.7	49.2	119	123	70.0-151			3.08	25
n-Hexane	13.2	15.3	15.6	116	118	70.0-130			1.82	25
Isopropylbenzene	18.4	21.3	22.3	116	121	70.0-130			4.28	25
Methylene Chloride	13.0	14.1	14.4	109	111	70.0-130			1.95	25

1Cp

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Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4055338-1 04/06/24 07:25 • (LCSD) R4055338-2 04/06/24 08:04

Analyte	Spike Amount ug/m3	LCS Result ug/m3	LCSD Result ug/m3	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methyl Butyl Ketone	15.3	17.7	18.2	115	119	70.0-149			3.19	25
2-Butanone (MEK)	11.1	13.4	13.8	122	125	70.0-130			2.60	25
4-Methyl-2-pentanone (MIBK)	15.4	17.9	18.5	117	121	70.0-139			3.37	25
Methyl methacrylate	15.4	17.7	18.6	115	121	70.0-130			4.74	25
MTBE	13.5	15.3	15.6	114	115	70.0-130			1.40	25
Naphthalene	19.6	24.5	25.4	125	130	70.0-159			3.77	25
2-Propanol	9.22	9.88	10.1	107	109	70.0-139			1.97	25
Propene	6.46	7.20	7.52	111	117	64.0-144			4.44	25
Styrene	16.0	18.6	19.1	117	120	70.0-130			2.70	25
1,1,2,2-Tetrachloroethane	25.8	29.3	30.4	114	118	70.0-130			3.69	25
Tetrachloroethylene	25.5	30.0	30.4	118	119	70.0-130			1.35	25
Tetrahydrofuran	11.1	12.9	12.9	117	117	70.0-137			0.457	25
Toluene	14.1	16.5	17.0	117	120	70.0-130			2.70	25
1,2,4-Trichlorobenzene	27.8	33.6	34.6	121	125	70.0-160			2.82	25
1,1,1-Trichloroethane	20.4	22.7	23.3	111	114	70.0-130			2.84	25
1,1,2-Trichloroethane	20.4	24.4	25.0	119	123	70.0-130			2.64	25
Trichloroethylene	20.1	23.5	24.5	117	122	70.0-130			4.02	25
1,2,4-Trimethylbenzene	18.4	21.0	21.5	114	117	70.0-130			2.31	25
1,3,5-Trimethylbenzene	18.4	20.4	21.2	111	115	70.0-130			3.78	25
2,2,4-Trimethylpentane	17.5	20.6	21.1	117	121	70.0-130			2.69	25
Vinyl chloride	9.59	10.1	10.4	105	108	70.0-130			3.00	25
Vinyl Bromide	16.4	18.8	19.6	115	119	70.0-130			4.10	25
Vinyl acetate	13.2	16.0	15.4	121	117	70.0-130			3.60	25
m&p-Xylene	32.5	39.0	40.2	120	124	70.0-130			2.96	25
o-Xylene	16.3	19.0	19.6	117	121	70.0-130			3.14	25
Xylenes, Total	49.1	58.2	59.9	119	122	70.0-130			2.94	25
(S) 1,4-Bromofluorobenzene				94.8	96.0	60.0-140				

1Cp

2Tc

3Ss

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GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

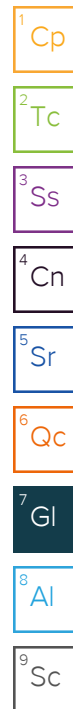
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
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ACCREDITATIONS & LOCATIONS

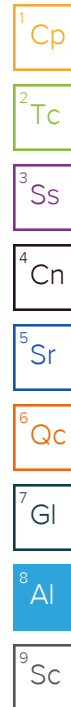
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





State Of Origin: VA

Cert. Needed: ☐ Yes ☐ No

Results Requested By: 4/12/2024

Report To				Subcontract To								Requested Analysis																				
Eben Buchanan Pace Analytical Peachtree 110 Technology Parkway Peachtree Corners, GA 30092 Phone (770)734-4200						Pace National 12065 Lebanon Rd Mt. Juliet, TN 37122 Phone (615) 758-5858						TO-15																				
													Preserved Containers																			
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Other																								LAB USE ONLY		
1	April 24hr Sample	PS	4/4/2024 10:57	92723821001	Air	1									X																	
2																																
3																																
4																																
5																																
															Comments																	
Transfers		Released By		Date/Time		Received By				Date/Time																						
1																																
2																																
3																																
Cooler Temperature on Receipt			°C		Custody Seal			Y or N			Received on Ice			Y or N			Samples Intact								Y or N							

This chain of custody is considered complete as is since this information is available in the owner laboratory.



Ship To:
Pace National
12065 Lebanon Rd
Mt. Juliet, TN 37122
Phone (615) 758-5858

INTER_LABORATORY WORK ORDER # 92723821
(To be completed by sending lab)

Sending Project No:	92723821
Receiving Project No:	
Check Box for Consolidated Invoice:	☐
Date Prepared:	04/08/24
REQUESTED COMPLETION DATE:	4/12/2024

Sending Region	IR92-Charlotte	Sending Project Mgr.	Eben Buchanan
Receiving Region	IR850-Pace National	External Client	City of Bristol VA
State of Sample Origin	VA	QC Deliverable	STD REPORT

All questions should be addressed to sending project manager.

Requested Reportable Units _____ Report Wet or Dry Weight? Dry Weight ☐ IRWO Lab Need to run? Cert. Needed _____

WORK REQUESTED						
Method Description	Container Type	Quantity of containers	Preservative	Quantity of Samples	Acode	Acode Desc
TO-15	U		Other	1	SI-21AIR	SUB PASI AIR

Special Requirements: Report D, QC Limits, MDLs (D),Draper Aden (337)

FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO

Return Samples to Sending Region: ☐ Yes ☐ No

DISPOSITION of FORM

Original sent to the receiving lab - Copy kept at the sending lab.
When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to corporate as needed.