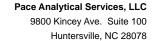
# ATTACHMENT 3 SAMPLING RESULTS (SEPTEMBER 24-HOUR SAMPLE)



(704)875-9092



September 26, 2022

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

RE: Project: City of Bristol VA

Pace Project No.: 92627616

## Dear David Cochran:

Enclosed are the analytical results for sample(s) received by the laboratory on September 15, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace National - Mt. Juliet

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

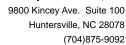
Sara Poulson sara.poulson@pacelabs.com (704)875-9092 Project Manager

Dan lower

Enclosures

cc: Logan Howard, SCS Engineers Mike Martin, City of Bristol VA Ms. Jennifer Robb, SCS Engineers







## **CERTIFICATIONS**

Project: City of Bristol VA
Pace Project No.: 92627616

## **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 #: Al30792
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

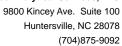
North Carolina Aquatic Toxicity Certification #: 41 North Carolina Drinking Water Certification #: 21704 North Carolina Environmental Certificate #: 375

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



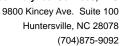


# **SAMPLE SUMMARY**

Project: City of Bristol VA

Pace Project No.: 92627616

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92627616001	September 24hr	Air	09/14/22 13:25	09/15/22 15:14





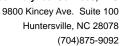
# **SAMPLE ANALYTE COUNT**

Project: City of Bristol VA

Pace Project No.: 92627616

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92627616001	September 24hr	TO-15	DAH	68	PAN

PAN = Pace National - Mt. Juliet

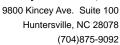




# **SUMMARY OF DETECTION**

Project: City of Bristol VA
Pace Project No.: 92627616

Lab Sample ID	Client Sample ID						
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers	
92627616001	September 24hr						
TO-15	Acetone	15.1	ug/m3	2.97	09/22/22 16:31		
TO-15	Benzene	15.5	ug/m3	0.639	09/22/22 16:31		
TO-15	Chloromethane	1.33	ug/m3	0.413	09/22/22 16:31		
TO-15	Ethanol	36.0	ug/m3	2.36	09/24/22 01:19		
TO-15	Ethylbenzene	2.64	ug/m3	0.867	09/22/22 16:31		
TO-15	Trichlorofluoromethane	1.53	ug/m3	1.12	09/22/22 16:31		
TO-15	Dichlorodifluoromethane	2.80	ug/m3	0.989	09/22/22 16:31		
TO-15	Methylene Chloride	3.61	ug/m3	0.694	09/22/22 16:31		
TO-15	2-Propanol	4.50	ug/m3	3.07	09/22/22 16:31		
TO-15	Propylene	3.31	ug/m3	2.15	09/22/22 16:31		
TO-15	Tetrahydrofuran	2.11	ug/m3	0.590	09/22/22 16:31		
TO-15	Toluene	2.88	ug/m3	1.88	09/22/22 16:31		
TO-15	m&p-Xylene	2.77	ug/m3	1.73	09/22/22 16:31		
TO-15	o-Xylene	0.941	ug/m3	0.867	09/22/22 16:31		





## **PROJECT NARRATIVE**

Project: City of Bristol VA
Pace Project No.: 92627616

Method: TO-15

Description: VOA (MS) TO-15
Client: City of Bristol VA
Date: September 26, 2022

## **General Information:**

1 sample was analyzed for TO-15 by Pace National Mt. Juliet. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

## **Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

# Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

#### **Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

## **Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

## Method Blank:

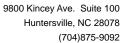
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

## **Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

## **Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.





# **ANALYTICAL RESULTS**

Project: City of Bristol VA
Page Project No: 92627616

Date: 09/26/2022 04:00 PM

Sample: September 24hr	Lab ID:	92627616001	Collected:	09/14/22	13:25	Received: 09/	15/22 15:14 Ma	atrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (MS) TO-15	Analytica	Method: TO-15	Preparation	Method: 7	TO-15				
	Pace Nat	ional - Mt. Juliet							
Acetone	15.1	ug/m3	2.97	0.5840	1	09/22/22 16:31	09/22/22 16:31	67-64-1	
Allyl chloride	ND	ug/m3	0.626	0.1140	1	09/22/22 16:31	09/22/22 16:31		
Benzene	15.5	ug/m3	0.639	0.0715	1	09/22/22 16:31	09/22/22 16:31		
Benzyl chloride	ND	ug/m3	1.04	0.0598	1	09/22/22 16:31	09/22/22 16:31		
Bromodichloromethane	ND	ug/m3	1.34	0.0702	1	09/22/22 16:31	09/22/22 16:31		
Bromoform	ND	ug/m3	6.21	0.0732	1	09/22/22 16:31	09/22/22 16:31		
Bromomethane	ND	ug/m3	0.776	0.0982	1	09/22/22 16:31	09/22/22 16:31		
1,3-Butadiene	ND	ug/m3	4.43	0.1040	1	09/22/22 16:31	09/22/22 16:31		
Carbon disulfide	ND	ug/m3	0.622	0.1020	1	09/22/22 16:31	09/22/22 16:31		
Carbon tetrachloride	ND	ug/m3	1.26	0.0732	1	09/22/22 16:31	09/22/22 16:31		
Chlorobenzene	ND	ug/m3	0.924	0.0832	1	09/22/22 16:31	09/22/22 16:31		
Chloroethane	ND	ug/m3	0.528	0.0996	1	09/22/22 16:31	09/22/22 16:31		
Chloroform	ND	ug/m3	0.973	0.0717	1	09/22/22 16:31	09/22/22 16:31		
Chloromethane	1.33	ug/m3	0.413	0.1030	1	09/22/22 16:31	09/22/22 16:31		
2-Chlorotoluene	ND	ug/m3	1.03	0.0828	1	09/22/22 16:31	09/22/22 16:31		
Cyclohexane	ND	ug/m3	0.689	0.0753	1	09/22/22 16:31	09/22/22 16:31		
Dibromochloromethane	ND	ug/m3	1.70	0.0727	1	09/22/22 16:31	09/22/22 16:31		
1,2-Dibromoethane (EDB)	ND	ug/m3	1.54	0.0721	1	09/22/22 16:31	09/22/22 16:31		
1,2-Dichlorobenzene	ND	ug/m3	1.20	0.1280	1	09/22/22 16:31	09/22/22 16:31		
1,3-Dichlorobenzene	ND	ug/m3	1.20	0.1820	1	09/22/22 16:31	09/22/22 16:31		
1,4-Dichlorobenzene	ND	ug/m3	1.20	0.0557	1	09/22/22 16:31	09/22/22 16:31		
1,2-Dichloroethane	ND	ug/m3	0.810	0.07	1	09/22/22 16:31	09/22/22 16:31		
1,1-Dichloroethane	ND	ug/m3	0.802	0.0723	1	09/22/22 16:31	09/22/22 16:31		
1,1-Dichloroethene	ND	ug/m3	0.793	0.0762	1	09/22/22 16:31	09/22/22 16:31		
cis-1,2-Dichloroethene	ND	ug/m3	0.793	0.0784	1	09/22/22 16:31	09/22/22 16:31		
trans-1,2-Dichloroethene	ND	ug/m3	0.793	0.0673	1	09/22/22 16:31	09/22/22 16:31		
1,2-Dichloropropane	ND	ug/m3	0.924	0.0760	1	09/22/22 16:31	09/22/22 16:31		
cis-1,3-Dichloropropene	ND	ug/m3	0.908	0.0689	1	09/22/22 16:31	09/22/22 16:31		
trans-1,3-Dichloropropene	ND	ug/m3	0.908	0.0728	1	09/22/22 16:31	09/22/22 16:31		
1,4-Dioxane (p-Dioxane)	ND	ug/m3	0.721	0.0833	1	09/22/22 16:31	09/22/22 16:31		
Ethanol	36.0	ug/m3	2.36	0.2650	1	09/24/22 01:19	09/24/22 01:19		
Ethylbenzene	2.64	ug/m3	0.867	0.0835	1	09/22/22 16:31	09/22/22 16:31		
4-Ethyltoluene	ND	ug/m3	0.982	0.0783	1	09/22/22 16:31	09/22/22 16:31		
Trichlorofluoromethane	1.53	ug/m3	1.12	0.0819	1	09/22/22 16:31	09/22/22 16:31		
Dichlorodifluoromethane	2.80	ug/m3	0.989	0.1370	1	09/22/22 16:31	09/22/22 16:31		
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.53	0.0793	1	09/22/22 16:31	09/22/22 16:31		
Dichlorotetrafluoroethane	ND	ug/m3	1.40	0.0890	1	09/22/22 16:31	09/22/22 16:31		
n-Heptane	ND	ug/m3	0.818	0.1040	1	09/22/22 16:31	09/22/22 16:31		
Hexachloro-1,3-butadiene	ND	ug/m3	6.73	0.1050	1	09/22/22 16:31	09/22/22 16:31		
n-Hexane	ND	ug/m3	2.22	0.2060	1	09/22/22 16:31	09/22/22 16:31		
Isopropylbenzene (Cumene)	ND ND	ug/m3	0.983	0.2000	1	09/22/22 16:31	09/22/22 16:31		
Methylene Chloride	3.61	ug/m3	0.983	0.0777	1	09/22/22 16:31	09/22/22 16:31		
2-Hexanone	3.61 ND	ug/m3	5.11	0.0979	1	09/22/22 16:31	09/22/22 16:31		
2-nexanone 2-Butanone (MEK)	ND ND	-	3.69	0.1330		09/22/22 16.31	09/22/22 16:31		
Z-DUIAHUHE (IVIEN)	טא	ug/m3	5.09	0.0014	1	03/22/22 10:31	03/22/22 10.31	10-33-3	



Date: 09/26/2022 04:00 PM

# **ANALYTICAL RESULTS**

Project: City of Bristol VA
Pace Project No.: 92627616

Sample: September 24hr	Lab ID:	92627616001	Collected	l: 09/14/2	2 13:25	Received: 09/	15/22 15:14 Ma	atrix: Air	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
VOA (MS) TO-15	•	Method: TO-1		n Method:	TO-15				
	Pace Nati	onal - Mt. Julie	Эĭ						
Methyl methacrylate	ND	ug/m3	0.819	0.0876	1	09/22/22 16:31	09/22/22 16:31	80-62-6	
Methyl-tert-butyl ether	ND	ug/m3	0.721	0.0647	1	09/22/22 16:31	09/22/22 16:31	1634-04-4	
Naphthalene	ND	ug/m3	3.30	0.35	1	09/22/22 16:31	09/22/22 16:31	91-20-3	
2-Propanol	4.50	ug/m3	3.07	0.2640	1	09/22/22 16:31	09/22/22 16:31	67-63-0	
Propylene	3.31	ug/m3	2.15	0.0932	1	09/22/22 16:31	09/22/22 16:31	115-07-1	
Styrene	ND	ug/m3	0.851	0.0788	1	09/22/22 16:31	09/22/22 16:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.37	0.0743	1	09/22/22 16:31	09/22/22 16:31	79-34-5	
Tetrachloroethene	ND	ug/m3	1.36	0.0814	1	09/22/22 16:31	09/22/22 16:31	127-18-4	
Tetrahydrofuran	2.11	ug/m3	0.590	0.0734	1	09/22/22 16:31	09/22/22 16:31	109-99-9	
Toluene	2.88	ug/m3	1.88	0.0870	1	09/22/22 16:31	09/22/22 16:31	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	4.66	0.1480	1	09/22/22 16:31	09/22/22 16:31	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.09	0.0736	1	09/22/22 16:31	09/22/22 16:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.09	0.0775	1	09/22/22 16:31	09/22/22 16:31	79-00-5	
Trichloroethene	ND	ug/m3	1.07	0.0680	1	09/22/22 16:31	09/22/22 16:31	79-01-6	
1,2,4-Trimethylbenzene	ND	ug/m3	0.982	0.0764	1	09/22/22 16:31	09/22/22 16:31	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	0.982	0.0779	1	09/22/22 16:31	09/22/22 16:31	108-67-8	
2,2,4-Trimethylpentane	ND	ug/m3	0.934	0.1330	1	09/22/22 16:31	09/22/22 16:31	540-84-1	
Vinyl chloride	ND	ug/m3	0.511	0.0949	1	09/22/22 16:31	09/22/22 16:31	75-01-4	
Vinyl bromide	ND	ug/m3	0.875	0.0852	1	09/22/22 16:31	09/22/22 16:31	593-60-2	
Vinyl acetate	ND	ug/m3	0.704	0.1160	1	09/22/22 16:31	09/22/22 16:31	108-05-4	
m&p-Xylene	2.77	ug/m3	1.73	0.1350	1	09/22/22 16:31	09/22/22 16:31	179601-23-1	
o-Xylene	0.941	ug/m3	0.867	0.0828	1	09/22/22 16:31	09/22/22 16:31	95-47-6	
Surrogates									
1,4-Dichlorobenzene-d4 (IS)	96.9	%	60.0-140		1	09/22/22 16:31	09/22/22 16:31	3855-82-1	
1,4-Dichlorobenzene-d4 (IS)	97.5	%	60.0-140		1	09/24/22 01:19	09/24/22 01:19	3855-82-1	

Huntersville, NC 28078 (704)875-9092



## **QUALITY CONTROL DATA**

Project: City of Bristol VA

Pace Project No.: 92627616

Date: 09/26/2022 04:00 PM

QC Batch: 1930517 Analysis Method: TO-15

QC Batch Method: M18-Mod/TO-15 Analysis Description: VOA (MS) TO-15

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 92627616001

METHOD BLANK: R3840179-1 Matrix: Air

Associated Lab Samples: 92627616001

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Acetone	ppbv	ND ND	1.25	0.584	09/22/22 09:40	
Allyl chloride	ppbv	ND	0.200	0.114	09/22/22 09:40	
Benzene	ppbv	ND	0.200	0.0715	09/22/22 09:40	
Benzyl chloride	ppbv	ND	0.200	0.0598	09/22/22 09:40	
Bromodichloromethane	ppbv	ND	0.200	0.0702	09/22/22 09:40	
Bromoform	ppbv	ND	0.600	0.0732	09/22/22 09:40	
Bromomethane	ppbv	ND	0.200	0.0982	09/22/22 09:40	
1,3-Butadiene	ppbv	ND	2.00	0.104	09/22/22 09:40	
Carbon disulfide	ppbv	ND	0.200	0.102	09/22/22 09:40	
Carbon tetrachloride	ppbv	ND	0.200	0.0732	09/22/22 09:40	
Chlorobenzene	ppbv	ND	0.200	0.0832	09/22/22 09:40	
Chloroethane	ppbv	ND	0.200	0.0996	09/22/22 09:40	
Chloroform	ppbv	ND	0.200	0.0717	09/22/22 09:40	
Chloromethane	ppbv	ND	0.200	0.103	09/22/22 09:40	
2-Chlorotoluene	ppbv	ND	0.200	0.0828	09/22/22 09:40	
Cyclohexane	ppbv	ND	0.200	0.0753	09/22/22 09:40	
Dibromochloromethane	ppbv	ND	0.200	0.0727	09/22/22 09:40	
1,2-Dibromoethane (EDB)	ppbv	ND	0.200	0.0721	09/22/22 09:40	
1,2-Dichlorobenzene	ppbv	ND	0.200	0.128	09/22/22 09:40	
1,3-Dichlorobenzene	ppbv	ND	0.200	0.182	09/22/22 09:40	
1,4-Dichlorobenzene	ppbv	ND	0.200	0.0557	09/22/22 09:40	
1,2-Dichloroethane	ppbv	ND	0.200	0.0700	09/22/22 09:40	
1,1-Dichloroethane	ppbv	ND	0.200	0.0723	09/22/22 09:40	
1,1-Dichloroethene	ppbv	ND	0.200	0.0762	09/22/22 09:40	
cis-1,2-Dichloroethene	ppbv	ND	0.200	0.0784	09/22/22 09:40	
trans-1,2-Dichloroethene	ppbv	ND	0.200	0.0673	09/22/22 09:40	
1,2-Dichloropropane	ppbv	ND	0.200	0.0760	09/22/22 09:40	
cis-1,3-Dichloropropene	ppbv	ND	0.200	0.0689	09/22/22 09:40	
trans-1,3-Dichloropropene	ppbv	ND	0.200	0.0728	09/22/22 09:40	
1,4-Dioxane (p-Dioxane)	ppbv	ND	0.200	0.0833	09/22/22 09:40	
Ethylbenzene	ppbv	ND	0.200	0.0835	09/22/22 09:40	
4-Ethyltoluene	ppbv	ND	0.200	0.0783	09/22/22 09:40	
Trichlorofluoromethane	ppbv	ND	0.200	0.0819	09/22/22 09:40	
Dichlorodifluoromethane	ppbv	ND	0.200	0.137	09/22/22 09:40	
1,1,2-Trichlorotrifluoroethane	ppbv	ND	0.200	0.0793	09/22/22 09:40	
Dichlorotetrafluoroethane	ppbv	ND	0.200	0.0890	09/22/22 09:40	
n-Heptane	ppbv	ND	0.200	0.104	09/22/22 09:40	
Hexachloro-1,3-butadiene	ppbv	ND	0.630	0.105	09/22/22 09:40	
n-Hexane	ppbv	ND	0.630	0.206	09/22/22 09:40	
Isopropylbenzene (Cumene)	ppbv	ND	0.200	0.0777	09/22/22 09:40	

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.

(704)875-9092



Date: 09/26/2022 04:00 PM

# **QUALITY CONTROL DATA**

Project: City of Bristol VA
Pace Project No.: 92627616

METHOD BLANK: R3840179-1 Matrix: Air

Associated Lab Samples: 92627616001

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Methylene Chloride	ppbv	ND ND	0.200	0.0979	09/22/22 09:40	
2-Hexanone	ppbv	ND	1.25	0.133	09/22/22 09:40	
2-Butanone (MEK)	ppbv	ND	1.25	0.0814	09/22/22 09:40	
4-Methyl-2-pentanone (MIBK)	ppbv	ND	1.25	0.0765	09/22/22 09:40	
Methyl methacrylate	ppbv	ND	0.200	0.0876	09/22/22 09:40	
Methyl-tert-butyl ether	ppbv	ND	0.200	0.0647	09/22/22 09:40	
Naphthalene	ppbv	ND	0.630	0.350	09/22/22 09:40	
2-Propanol	ppbv	ND	1.25	0.264	09/22/22 09:40	
Propylene	ppbv	0.133J	1.25	0.0932	09/22/22 09:40	J
Styrene	ppbv	ND	0.200	0.0788	09/22/22 09:40	
1,1,2,2-Tetrachloroethane	ppbv	ND	0.200	0.0743	09/22/22 09:40	
Tetrachloroethene	ppbv	ND	0.200	0.0814	09/22/22 09:40	
Tetrahydrofuran	ppbv	ND	0.200	0.0734	09/22/22 09:40	
Toluene	ppbv	ND	0.500	0.0870	09/22/22 09:40	
1,2,4-Trichlorobenzene	ppbv	ND	0.630	0.148	09/22/22 09:40	
1,1,1-Trichloroethane	ppbv	ND	0.200	0.0736	09/22/22 09:40	
1,1,2-Trichloroethane	ppbv	ND	0.200	0.0775	09/22/22 09:40	
Trichloroethene	ppbv	ND	0.200	0.0680	09/22/22 09:40	
1,2,4-Trimethylbenzene	ppbv	ND	0.200	0.0764	09/22/22 09:40	
1,3,5-Trimethylbenzene	ppbv	ND	0.200	0.0779	09/22/22 09:40	
2,2,4-Trimethylpentane	ppbv	ND	0.200	0.133	09/22/22 09:40	
Vinyl chloride	ppbv	ND	0.200	0.0949	09/22/22 09:40	
Vinyl bromide	ppbv	ND	0.200	0.0852	09/22/22 09:40	
Vinyl acetate	ppbv	ND	0.200	0.116	09/22/22 09:40	
m&p-Xylene	ppbv	ND	0.400	0.135	09/22/22 09:40	
o-Xylene	ppbv	ND	0.200	0.0828	09/22/22 09:40	
1,4-Dichlorobenzene-d4 (IS)	%	97.6	60.0-140		09/22/22 09:40	

LABORATORY CONTROL SAMPLE & L	CSD: R3840	179-2	R3	3840179-3						
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
Acetone	ppbv	3.75	4.73	4.36	126	116	70.0-130	8.14	25	_
Allyl chloride	ppbv	3.75	4.52	4.53	121	121	70.0-130	0.221	25	
Benzene	ppbv	3.75	3.71	3.78	98.9	101	70.0-130	1.87	25	
Benzyl chloride	ppbv	3.75	3.80	3.74	101	99.7	70.0-152	1.59	25	
Bromodichloromethane	ppbv	3.75	3.60	3.64	96.0	97.1	70.0-130	1.10	25	
Bromoform	ppbv	3.75	3.47	3.51	92.5	93.6	70.0-130	1.15	25	
Bromomethane	ppbv	3.75	4.16	4.21	111	112	70.0-130	1.19	25	
1,3-Butadiene	ppbv	3.75	4.45	4.49	119	120	70.0-130	0.895	25	
Carbon disulfide	ppbv	3.75	4.65	4.67	124	125	70.0-130	0.429	25	
Carbon tetrachloride	ppbv	3.75	3.60	3.63	96.0	96.8	70.0-130	0.830	25	
Chlorobenzene	ppbv	3.75	3.62	3.69	96.5	98.4	70.0-130	1.92	25	
Chloroethane	ppbv	3.75	4.20	4.29	112	114	70.0-130	2.12	25	
Chloroform	ppbv	3.75	3.80	3.85	101	103	70.0-130	1.31	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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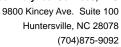
Date: 09/26/2022 04:00 PM

# **QUALITY CONTROL DATA**

Project: City of Bristol VA
Pace Project No.: 92627616

ABORATORY CONTROL SAMPLE &	LCSD: R3840			3840179-3						
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifier
Chloromethane	ppbv	3.75	4.45	4.56	119	122	70.0-130	2.44	25	
2-Chlorotoluene	ppbv	3.75	3.75	3.78	100	101	70.0-130	0.797	25	
Cyclohexane	ppbv	3.75	3.72	3.76	99.2	100	70.0-130	1.07	25	
Dibromochloromethane	ppbv	3.75	3.48	3.49	92.8	93.1	70.0-130	0.287	25	
,2-Dibromoethane (EDB)	ppbv	3.75	3.53	3.68	94.1	98.1	70.0-130	4.16	25	
,2-Dichlorobenzene	ppbv	3.75	3.62	3.71	96.5	98.9	70.0-130	2.46	25	
,3-Dichlorobenzene	ppbv	3.75	3.70	3.77	98.7	101	70.0-130	1.87	25	
,4-Dichlorobenzene	ppbv	3.75	3.69	3.80	98.4	101	70.0-130	2.94	25	
,2-Dichloroethane	ppbv	3.75	3.71	3.85	98.9	103	70.0-130	3.70	25	
,1-Dichloroethane	ppbv	3.75	3.82	3.90	102	104	70.0-130	2.07	25	
,1-Dichloroethene	ppbv	3.75	4.49	4.53	120	121	70.0-130	0.887	25	
is-1,2-Dichloroethene	ppbv	3.75	3.78	3.84	101	102	70.0-130	1.57	25	
rans-1,2-Dichloroethene	ppbv	3.75	4.56	4.66	122	124	70.0-130	2.17	25	
,2-Dichloropropane	ppbv	3.75	3.74	3.78	99.7	101	70.0-130	1.06	25	
is-1,3-Dichloropropene	ppbv	3.75	3.68	3.78	98.1	101	70.0-130	2.68	25	
rans-1,3-Dichloropropene	ppbv	3.75	3.57	3.70	95.2	98.7	70.0-130	3.58	25	
,4-Dioxane (p-Dioxane)	ppbv	3.75	3.25	3.37	86.7	89.9	70.0-140	3.63	25	
Ethylbenzene	ppbv	3.75	3.72	3.77	99.2	101	70.0-130	1.34	25	
-Ethyltoluene	ppbv	3.75	3.66	3.80	97.6	101	70.0-130	3.75	25	
Trichlorofluoromethane	ppbv	3.75	4.32	4.29	115	114	70.0-130	0.697	25	
Dichlorodifluoromethane	ppbv	3.75	4.19	4.23		113	64.0-139	0.950	25	
,1,2-Trichlorotrifluoroethane	ppbv	3.75	4.50	4.55	120	121	70.0-130	1.10	25	
Dichlorotetrafluoroethane	ppbv	3.75	4.47	4.53	119	121	70.0-130	1.33	25	
-Heptane	ppbv	3.75	3.89	3.99	104	106	70.0-130	2.54	25	
Hexachloro-1,3-butadiene	ppbv	3.75	3.49	3.62		96.5	70.0-151	3.66	25	
-Hexane	ppbv	3.75	3.90	3.96	104	106	70.0-130	1.53	25	
sopropylbenzene (Cumene)	ppbv	3.75	3.73	3.79	99.5	101	70.0-130	1.60	25	
Methylene Chloride	ppbv	3.75	4.48	4.59	119	122	70.0-130	2.43	25	
-Hexanone	ppbv	3.75	3.36	3.45	89.6	92.0	70.0-149	2.64	25	
P-Butanone (MEK)	ppbv	3.75	3.75	3.89	100	104	70.0-130	3.66	25	
-Methyl-2-pentanone (MIBK)	ppbv	3.75	3.73	3.86	99.5	103	70.0-139	3.43	25	
Methyl methacrylate	ppbv	3.75	3.53	3.58	94.1	95.5	70.0-130	1.41	25	
Methyl-tert-butyl ether	ppbv	3.75	3.82	3.91	102	104	70.0-130	2.33	25	
Naphthalene	ppbv	3.75	3.65	3.74	97.3	99.7	70.0-150	2.44	25	
P-Propanol	ppbv	3.75	4.40	4.60		123	70.0-133	4.44	25	
Propylene	ppbv	3.75	3.76	3.83	100	102	64.0-144	1.84	25	
Styrene	ppbv	3.75	3.61	3.64	96.3	97.1	70.0-130	0.828	25	
,1,2,2-Tetrachloroethane	ppbv	3.75	3.71	3.77	98.9	101	70.0-130	1.60	25	
etrachloroethene	ppbv	3.75	3.52	3.61	93.9	96.3	70.0-130	2.52	25	
etrachioroetherie etrahydrofuran	ppbv	3.75	3.70	3.71	98.7	98.9	70.0-130	0.270	25	
oluene	ppbv	3.75	3.63	3.71		98.7		1.91	25 25	
,2,4-Trichlorobenzene	ppbv	3.75	3.50	3.65		97.3	70.0-130	4.20	25 25	
,1,1-Trichloroethane			3.50			100	70.0-160	1.34		
	ppbv	3.75		3.76					25 25	
,1,2-Trichloroethane Trichloroethene	ppbv	3.75 3.75	3.58 3.73	3.62			70.0-130 70.0-130	1.11	25 25	
	ppbv			3.83				2.65		
,2,4-Trimethylbenzene ,3,5-Trimethylbenzene	ppbv ppbv	3.75 3.75	3.80 3.70	3.88 3.78		103 101	70.0-130 70.0-130	2.08 2.14	25 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.





Date: 09/26/2022 04:00 PM

# **QUALITY CONTROL DATA**

Project: City of Bristol VA
Pace Project No.: 92627616

LABORATORY CONTROL SAMPLE	& LCSD: R3840	179-2	R:	3840179-3						
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
2,2,4-Trimethylpentane	ppbv	3.75	3.87	3.93	103	105	70.0-130	1.54	25	
/inyl chloride	ppbv	3.75	4.37	4.42	117	118	70.0-130	1.14	25	
/inyl bromide	ppbv	3.75	4.22	4.32	113	115	70.0-130	2.34	25	
/inyl acetate	ppbv	3.75	3.69	3.59	98.4	95.7	70.0-130	2.75	25	
n&p-Xylene	ppbv	7.50	7.69	7.86	103	105	70.0-130	2.19	25	
o-Xylene	ppbv	3.75	3.80	3.84	101	102	70.0-130	1.05	25	
1,4-Dichlorobenzene-d4 (IS)	%				99.3	99.8	60.0-140			

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.



## **QUALITY CONTROL DATA**

Project:

QC Batch:

City of Bristol VA

Pace Project No.:

92627616

QC Batch Method:

1931275

TO-15

Analysis Method: Analysis Description: TO-15

VOA (MS) TO-15

Laboratory:

Pace National - Mt. Juliet

Associated Lab Samples: 92627616001

METHOD BLANK:

R3840790-3

Matrix: Air

Associated Lab Samples:

92627616001

Units Parameter

Blank Reporting Result

Analyzed

MDL Limit 1.25 0.265 09/23/22 10:00

Ethanol 1,4-Dichlorobenzene-d4 (IS) ppbv %

ND 98.6

60.0-140

09/23/22 10:00

1.12

Qualifiers

LABORATORY CONTROL SAMPLE & LCSD:

R3840790-1

Spike

Conc.

R3840790-2 LCS LCSD Result Result

LCS LCSD % Rec % Rec

% Rec Max Limits **RPD RPD** 

Qualifiers

Ethanol

Date: 09/26/2022 04:00 PM

Units ppbv

4.42

118 119

25

55.0-148 100 99.9 60.0-140

1,4-Dichlorobenzene-d4 (IS)

Parameter

3.75 4.47 %

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.



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

## **QUALIFIERS**

Project: City of Bristol VA
Pace Project No.: 92627616

## **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.

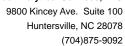
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## **ANALYTE QUALIFIERS**

Date: 09/26/2022 04:00 PM

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





Date: 09/26/2022 04:00 PM

# **QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: City of Bristol VA
Pace Project No.: 92627616

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92627616001	September 24hr	TO-15	1930517	TO-15	1930517
92627616001	September 24hr	TO-15	1931275	TO-15	1931275

Neimquished by : (5)gnature)	Andel	Relinquished by (Suppartie)	Remarks:		September 24hr	Sample ID	26 Cura	Collected by (print):  Dalvid Cach van D  Collected by (signature):	Phone: 704-875-9092	Project City of Bristol Description:	Report To: Sara Poulson	Company Name/Address: Pace Analytical - Huntersville, NC 9800 Kincey Avenue, Suite 100 Huntersville, NC 28078
Dates	9/15	Dist		COC Seal Present/Intact; COC Signed Accurate: Bottles arrive intact; Correct hortles used; Sufficient volume sent; Pan Screen of 5 mP/hr;	r 7236	Can#	Rush? (Lab MUST Be Notified) Same Day Three Day Next Day Five Day Two Day	Site/Facility ID #	Client Project #			tersville, NC
Time:	122 3:14pm			A NAME OF THE PARTY OF THE PART	50105	Flow Cont. #	Be Notified) Three Day Five Day			City/State Collected:		
Received by: (Signature)		Samples returned via:		VOA Zero Headspace: Y N Free.Correct/Checks Y N	9/14/12 1:25/	Date Time	Collection	P.O.#	PACE-POULSONVA		Email To: Sara.Poulson@pacelabs.com	Billing information: Accounts Payable 9800 Kincey Ave., Ste. 10 Huntersville, NC 28078
		ourier			如以不	Initial	(2) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	Date Bassilts Mondad				MO#:
Date: Ti	Date: Ta	Tracking #			25H6	Final	Pressure/Vacuum			Please Circle: PT MT CT ET		92627616
Time:	Time:				×	ТС	D-15 Sumn	na				16
COC Seal Intact: Y N NA	Condition: (lab use only)	Hold#			-	Shipped Via: FedEX Ground  Rem./Contaminant Sample # flab only)	Prelogin: P945122 PM: 844-Christi M Wagnar PB: 134	Acctnum: PACE Template: T210823	1217	https://info.pacelabs.com/httbfs/pas- sandard-terms.pdf	12065 Lebason Road Mri Julea, TN 37122 Phone of 5-72s-585s Alta soct-267 585s Submitting a sample via this chain of cautody solvantiling a sample via this chain of cautody constitutes advanced legiment and acceptance of the Pace Terms and Conditions found as	Chain of Custody Page o  Pace  People Advancing science  MT JULIET, IN