Pelton, Jason M (DEC)

From: Stan Carey <scarey@massapequawater.com>
Sent: Friday, November 15, 2019 2:37 PM
To: Pelton, Jason M (DEC)
Subject: Split Samples
Attachments: 70110734_NY.pdf; 70110734_frc.pdf

Jason,
Attached are the rest of the split samples MWD collected. Everything looks good with the exception of a small 1,4 Dioxane hit of .67 ppb on TT102D1. Not sure if you consider this of any significance?

Thank you,

Stan Carey, Superintendent
Massapequa Water District

From: Paceport Email Notification [mailto:stu.murrell@pacelabs.com]
Sent: Friday, November 15, 2019 2:28 PM
To: stu.murrell@pacelabs.com; Stan Carey; jtodaro@h2m.com; John Speciale
Subject: POC/1,4-DIOX/PFAS 11/5 (Pace Project # 70110734)

Paceport Login

Pace Automated Email Notification

This email contains EDDs and Reports generated by Paceport's automated deliverable service. The attached files have been authorized to be sent to you due to the completion of project 70110734. Your Pace project manager has been CC'ed on this email so that you may request any further assistance.

To access this project's page in paceport click on the following link.
http://paceport.pacelabs.com/ClientPortal/mvc/projectDetails/modelAndView?projectID=70110734&systemID=lims70

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

November 15, 2019

Stan Carey
Massapequa Water District
84 Grand Ave.
Massapequa, NY 11758

RE: Project: POC/1,4-DIOX/PFAS 11/5
Pace Project No.: 70110734

Dear Stan Carey:
Enclosed are the analytical results for sample(s) received by the laboratory on November 05, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Kimberley Mack

Kimberley M. Mack for
Stu Murrell
stu.murrell@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: John Speciale, Massapequa Water District
Joe Todaro, H2M Group

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: POC/1,4-DIOX/PFAS 11/5
Pace Project No.: 70110734

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
Arizona Certification# AZ0819
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

Long Island Certification IDs

575 Broad Hollow Rd, Melville, NY 11747
New York Certification #: 10478 Primary Accrediting Body
New Jersey Certification #: NY158
Pennsylvania Certification #: 68-00350
Connecticut Certification #: PH-0435
Maryland Certification #: 208
Rhode Island Certification #: LAO00340
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987

Pace Analytical Services, LLC
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SAMPLE SUMMARY

Project: POC/1,4-DIOX/PFAS 11/5
Pace Project No.: 70110734

Lab ID	Sample ID	Matrix	Date Collected	Date Received
70110734001	**TT102D2**	Drinking Water	11/05/19 12:50	11/05/19 14:36
70110734002	**TT102D1**	Drinking Water	11/05/19 13:10	11/05/19 14:36

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SAMPLE ANALYTE COUNT

Project: POC/1,4-DIOX/PFAS 11/5
Pace Project No.: 70110734

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
70110734001	**TT102D2**	EPA 537	SWR	10	PASI-O
		EPA 522	TJD	2	PACE-MV
		EPA 524.2	KGG	62	PACE-MV
70110734002	**TT102D1**	EPA 537	SWR	10	PASI-O
		EPA 522	TJD	2	PACE-MV
		EPA 524.2	KGG	62	PACE-MV

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: POC/1,4-DIOX/PFAS 11/5
Pace Project No.: 70110734

Sample: TT102D2 **Lab ID: 70110734001** Collected: 11/05/19 12:50 Received: 11/05/19 14:36 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
537 PFOA Compounds, Water	Analytical Method: EPA 537 Preparation Method: EPA 537								
Perfluorobutanesulfonic acid	**<1.9**	ng/L	1.9		1	11/08/19 08:54	11/13/19 23:38	375-73-5	
Perfluoroheptanoic acid	**<1.9**	ng/L	1.9		1	11/08/19 08:54	11/13/19 23:38	375-85-9	
Perfluorohexanesulfonic acid	**<1.9**	ng/L	1.9		1	11/08/19 08:54	11/13/19 23:38	355-46-4	
Perfluorononanoic acid	**<1.9**	ng/L	1.9		1	11/08/19 08:54	11/13/19 23:38	375-95-1	
Perfluorooctanesulfonic acid	**<1.9**	ng/L	1.9	10	1	11/08/19 08:54	11/13/19 23:38	1763-23-1	
Perfluorooctanoic acid	**<1.9**	ng/L	1.9	10	1	11/08/19 08:54	11/13/19 23:38	335-67-1	
Surrogates									
13C2-PFDA (S)	98	%	70-130		1	11/08/19 08:54	11/13/19 23:38		
13C2-PFHxA (S)	97	%	70-130		1	11/08/19 08:54	11/13/19 23:38		
NEtFOSAA-d5 (S)	104	%	70-130		1	11/08/19 08:54	11/13/19 23:38		
HFPO-DAS (S)	101	%	70-130		1	11/08/19 08:54	11/13/19 23:38		
522 MSS 1,4 Dioxane (SIM)	Analytical Method: EPA 522 Preparation Method: EPA 522								
1,4-Dioxane (p-Dioxane)	**<0.020**	ug/L	0.020		1	11/07/19 09:45	11/07/19 20:20	123-91-1	
Surrogates									
1,4-Dioxane-d8 (S)	86	%	70-130		1	11/07/19 09:45	11/07/19 20:20		
524.2 MSV	Analytical Method: EPA 524.2								
Benzene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	71-43-2	
Bromobenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	108-86-1	
Bromochloromethane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	75-27-4	
Bromoform	**<0.50**	ug/L	0.50		1		11/08/19 12:23	75-25-2	
Bromomethane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	74-83-9	L1
n-Butylbenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	104-51-8	
sec-Butylbenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	135-98-8	
tert-Butylbenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	0.50		1		11/08/19 12:23	56-23-5	
Chlorobenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	108-90-7	
Chlorodifluoromethane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	75-45-6	L2,N3
Chloroethane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	75-00-3	
Chloroform	**<0.50**	ug/L	0.50		1		11/08/19 12:23	67-66-3	
Chloromethane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	74-87-3	CL
2-Chlorotoluene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	95-49-8	
4-Chlorotoluene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	106-43-4	
Dibromochloromethane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	124-48-1	
Dibromomethane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	106-46-7	
Dichlorodifluoromethane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	75-71-8	L2
1,1-Dichloroethane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	75-34-3	
1,2-Dichloroethane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	107-06-2	
1,1-Dichloroethene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	75-35-4	
cis-1,2-Dichloroethene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	156-59-2	
trans-1,2-Dichloroethene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	156-60-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: POC/1,4-DIOX/PFAS 11/5
Pace Project No.: 70110734

Sample: TT102D2 **Lab ID: 70110734001** Collected: 11/05/19 12:50 Received: 11/05/19 14:36 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
1,2-Dichloropropane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	142-28-9	
2,2-Dichloropropane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	594-20-7	
1,1-Dichloropropene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	10061-01-5	
trans-1,3-Dichloropropene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	10061-02-6	
Ethylbenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	100-41-4	
Hexachloro-1,3-butadiene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	87-68-3	
Isopropylbenzene (Cumene)	**<0.50**	ug/L	0.50		1		11/08/19 12:23	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	99-87-6	
Methylene Chloride	**<0.50**	ug/L	0.50		1		11/08/19 12:23	75-09-2	
Methyl-tert-butyl ether	**<0.50**	ug/L	0.50		1		11/08/19 12:23	1634-04-4	L1
n-Propylbenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	103-65-1	
Styrene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	127-18-4	
Toluene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	108-88-3	
Total Trihalomethanes (Calc.)	**<0.50**	ug/L	0.50		1		11/08/19 12:23		
1,2,3-Trichlorobenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	87-61-6	
1,2,4-Trichlorobenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	71-55-6	
1,1,2-Trichloroethane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	79-00-5	
Trichloroethene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	79-01-6	
Trichlorofluoromethane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	96-18-4	
1,1,2-Trichlorotrifluoroethane	**<0.50**	ug/L	0.50		1		11/08/19 12:23	76-13-1	L1,N3
1,2,4-Trimethylbenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	108-67-8	
Vinyl chloride	**<0.50**	ug/L	0.50		1		11/08/19 12:23	75-01-4	
m&p-Xylene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	179601-23-1	
o-Xylene	**<0.50**	ug/L	0.50		1		11/08/19 12:23	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	83	%	70-130		1		11/08/19 12:23	2199-69-1	
4-Bromofluorobenzene (S)	88	%	70-130		1		11/08/19 12:23	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: POC/1,4-DIOX/PFAS 11/5
Pace Project No.: 70110734

Sample: TT102D1 **Lab ID: 70110734002** Collected: 11/05/19 13:10 Received: 11/05/19 14:36 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
537 PFOA Compounds, Water	Analytical Method: EPA 537 Preparation Method: EPA 537								
Perfluorobutanesulfonic acid	**<1.8**	ng/L	1.8		1	11/08/19 08:54	11/13/19 23:56	375-73-5	
Perfluoroheptanoic acid	**<1.8**	ng/L	1.8		1	11/08/19 08:54	11/13/19 23:56	375-85-9	
Perfluorohexanesulfonic acid	**<1.8**	ng/L	1.8		1	11/08/19 08:54	11/13/19 23:56	355-46-4	
Perfluorononanoic acid	**<1.8**	ng/L	1.8		1	11/08/19 08:54	11/13/19 23:56	375-95-1	
Perfluorooctanesulfonic acid	**<1.8**	ng/L	1.8	10	1	11/08/19 08:54	11/13/19 23:56	1763-23-1	
Perfluorooctanoic acid	**<1.8**	ng/L	1.8	10	1	11/08/19 08:54	11/13/19 23:56	335-67-1	
Surrogates									
13C2-PFDA (S)	98	%	70-130		1	11/08/19 08:54	11/13/19 23:56		
13C2-PFHxA (S)	105	%	70-130		1	11/08/19 08:54	11/13/19 23:56		
NEtFOSAA-d5 (S)	99	%	70-130		1	11/08/19 08:54	11/13/19 23:56		
HFPO-DAS (S)	110	%	70-130		1	11/08/19 08:54	11/13/19 23:56		
522 MSS 1,4 Dioxane (SIM)	Analytical Method: EPA 522 Preparation Method: EPA 522								
1,4-Dioxane (p-Dioxane)	**0.67**	ug/L	0.020		1	11/07/19 09:45	11/07/19 20:43	123-91-1	
Surrogates									
1,4-Dioxane-d8 (S)	84	%	70-130		1	11/07/19 09:45	11/07/19 20:43		
524.2 MSV	Analytical Method: EPA 524.2								
Benzene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	71-43-2	
Bromobenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	108-86-1	
Bromochloromethane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	75-27-4	
Bromoform	**<0.50**	ug/L	0.50		1		11/08/19 12:50	75-25-2	
Bromomethane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	74-83-9	L1
n-Butylbenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	104-51-8	
sec-Butylbenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	135-98-8	
tert-Butylbenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	0.50		1		11/08/19 12:50	56-23-5	
Chlorobenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	108-90-7	
Chlorodifluoromethane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	75-45-6	L2,N3
Chloroethane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	75-00-3	
Chloroform	**<0.50**	ug/L	0.50		1		11/08/19 12:50	67-66-3	
Chloromethane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	74-87-3	CL
2-Chlorotoluene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	95-49-8	
4-Chlorotoluene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	106-43-4	
Dibromochloromethane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	124-48-1	
Dibromomethane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	106-46-7	
Dichlorodifluoromethane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	75-71-8	L2
1,1-Dichloroethane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	75-34-3	
1,2-Dichloroethane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	107-06-2	
1,1-Dichloroethene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	75-35-4	
cis-1,2-Dichloroethene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	156-59-2	
trans-1,2-Dichloroethene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	156-60-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: POC/1,4-DIOX/PFAS 11/5
Pace Project No.: 70110734

Sample: TT102D1 **Lab ID: 70110734002** Collected: 11/05/19 13:10 Received: 11/05/19 14:36 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
1,2-Dichloropropane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	142-28-9	
2,2-Dichloropropane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	594-20-7	
1,1-Dichloropropene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	10061-01-5	
trans-1,3-Dichloropropene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	10061-02-6	
Ethylbenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	100-41-4	
Hexachloro-1,3-butadiene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	87-68-3	
Isopropylbenzene (Cumene)	**<0.50**	ug/L	0.50		1		11/08/19 12:50	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	99-87-6	
Methylene Chloride	**<0.50**	ug/L	0.50		1		11/08/19 12:50	75-09-2	
Methyl-tert-butyl ether	**<0.50**	ug/L	0.50		1		11/08/19 12:50	1634-04-4	L1
n-Propylbenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	103-65-1	
Styrene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	127-18-4	
Toluene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	108-88-3	
Total Trihalomethanes (Calc.)	**<0.50**	ug/L	0.50		1		11/08/19 12:50		
1,2,3-Trichlorobenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	87-61-6	
1,2,4-Trichlorobenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	71-55-6	
1,1,2-Trichloroethane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	79-00-5	
Trichloroethene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	79-01-6	
Trichlorofluoromethane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	96-18-4	
1,1,2-Trichlorotrifluoroethane	**<0.50**	ug/L	0.50		1		11/08/19 12:50	76-13-1	L1,N3
1,2,4-Trimethylbenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	108-67-8	
Vinyl chloride	**<0.50**	ug/L	0.50		1		11/08/19 12:50	75-01-4	
m&p-Xylene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	179601-23-1	
o-Xylene	**<0.50**	ug/L	0.50		1		11/08/19 12:50	95-47-6	
Surrogates									
1,2-Dichlorobenzene-d4 (S)	80	%	70-130		1		11/08/19 12:50	2199-69-1	
4-Bromofluorobenzene (S)	88	%	70-130		1		11/08/19 12:50	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: POC/1,4-DIOX/PFAS 11/5
Pace Project No.: 70110734

QC Batch: 137728 Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2 Analysis Description: 524.2 MSV
Associated Lab Samples: 70110734001, 70110734002

METHOD BLANK: 659509 Matrix: Water
Associated Lab Samples: 70110734001, 70110734002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.50	0.50	11/08/19 07:48	
1,1,1-Trichloroethane	ug/L	<0.50	0.50	11/08/19 07:48	
1,1,2,2-Tetrachloroethane	ug/L	<0.50	0.50	11/08/19 07:48	
1,1,2-Trichloroethane	ug/L	<0.50	0.50	11/08/19 07:48	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.50	0.50	11/08/19 07:48	N3
1,1-Dichloroethane	ug/L	<0.50	0.50	11/08/19 07:48	
1,1-Dichloroethene	ug/L	<0.50	0.50	11/08/19 07:48	
1,1-Dichloropropene	ug/L	<0.50	0.50	11/08/19 07:48	
1,2,3-Trichlorobenzene	ug/L	<0.50	0.50	11/08/19 07:48	
1,2,3-Trichloropropane	ug/L	<0.50	0.50	11/08/19 07:48	
1,2,4-Trichlorobenzene	ug/L	<0.50	0.50	11/08/19 07:48	
1,2,4-Trimethylbenzene	ug/L	<0.50	0.50	11/08/19 07:48	
1,2-Dichlorobenzene	ug/L	<0.50	0.50	11/08/19 07:48	
1,2-Dichloroethane	ug/L	<0.50	0.50	11/08/19 07:48	
1,2-Dichloropropane	ug/L	<0.50	0.50	11/08/19 07:48	
1,3,5-Trimethylbenzene	ug/L	<0.50	0.50	11/08/19 07:48	
1,3-Dichlorobenzene	ug/L	<0.50	0.50	11/08/19 07:48	
1,3-Dichloropropane	ug/L	<0.50	0.50	11/08/19 07:48	
1,4-Dichlorobenzene	ug/L	<0.50	0.50	11/08/19 07:48	
2,2-Dichloropropane	ug/L	<0.50	0.50	11/08/19 07:48	
2-Chlorotoluene	ug/L	<0.50	0.50	11/08/19 07:48	
4-Chlorotoluene	ug/L	<0.50	0.50	11/08/19 07:48	
Benzene	ug/L	<0.50	0.50	11/08/19 07:48	
Bromobenzene	ug/L	<0.50	0.50	11/08/19 07:48	
Bromochloromethane	ug/L	<0.50	0.50	11/08/19 07:48	
Bromodichloromethane	ug/L	<0.50	0.50	11/08/19 07:48	
Bromoform	ug/L	<0.50	0.50	11/08/19 07:48	
Bromomethane	ug/L	<0.50	0.50	11/08/19 07:48	
Carbon tetrachloride	ug/L	<0.50	0.50	11/08/19 07:48	
Chlorobenzene	ug/L	<0.50	0.50	11/08/19 07:48	
Chlorodifluoromethane	ug/L	<0.50	0.50	11/08/19 07:48	N3
Chloroethane	ug/L	<0.50	0.50	11/08/19 07:48	
Chloroform	ug/L	<0.50	0.50	11/08/19 07:48	
Chloromethane	ug/L	<0.50	0.50	11/08/19 07:48	CL
cis-1,2-Dichloroethene	ug/L	<0.50	0.50	11/08/19 07:48	
cis-1,3-Dichloropropene	ug/L	<0.50	0.50	11/08/19 07:48	
Dibromochloromethane	ug/L	<0.50	0.50	11/08/19 07:48	
Dibromomethane	ug/L	<0.50	0.50	11/08/19 07:48	
Dichlorodifluoromethane	ug/L	<0.50	0.50	11/08/19 07:48	
Ethylbenzene	ug/L	<0.50	0.50	11/08/19 07:48	
Hexachloro-1,3-butadiene	ug/L	<0.50	0.50	11/08/19 07:48	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: POC/1,4-DIOX/PFAS 11/5
Pace Project No.: 70110734

METHOD BLANK: 659509 Matrix: Water
Associated Lab Samples: 70110734001, 70110734002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isopropylbenzene (Cumene)	ug/L	<0.50	0.50	11/08/19 07:48	
m&p-Xylene	ug/L	<0.50	0.50	11/08/19 07:48	
Methyl-tert-butyl ether	ug/L	<0.50	0.50	11/08/19 07:48	
Methylene Chloride	ug/L	<0.50	0.50	11/08/19 07:48	
n-Butylbenzene	ug/L	<0.50	0.50	11/08/19 07:48	
n-Propylbenzene	ug/L	<0.50	0.50	11/08/19 07:48	
o-Xylene	ug/L	<0.50	0.50	11/08/19 07:48	
p-Isopropyltoluene	ug/L	<0.50	0.50	11/08/19 07:48	
sec-Butylbenzene	ug/L	<0.50	0.50	11/08/19 07:48	
Styrene	ug/L	<0.50	0.50	11/08/19 07:48	
tert-Butylbenzene	ug/L	<0.50	0.50	11/08/19 07:48	
Tetrachloroethene	ug/L	<0.50	0.50	11/08/19 07:48	
Toluene	ug/L	<0.50	0.50	11/08/19 07:48	
Total Trihalomethanes (Calc.)	ug/L	<0.50	0.50	11/08/19 07:48	
trans-1,2-Dichloroethene	ug/L	<0.50	0.50	11/08/19 07:48	
trans-1,3-Dichloropropene	ug/L	<0.50	0.50	11/08/19 07:48	
Trichloroethene	ug/L	<0.50	0.50	11/08/19 07:48	
Trichlorofluoromethane	ug/L	<0.50	0.50	11/08/19 07:48	
Vinyl chloride	ug/L	<0.50	0.50	11/08/19 07:48	
1,2-Dichlorobenzene-d4 (S)	%	81	70-130	11/08/19 07:48	
4-Bromofluorobenzene (S)	%	91	70-130	11/08/19 07:48	

LABORATORY CONTROL SAMPLE: 659510

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	10	9.9	99	70-130	
1,1,1-Trichloroethane	ug/L	10	8.6	86	70-130	
1,1,2,2-Tetrachloroethane	ug/L	10	9.9	99	70-130	
1,1,2-Trichloroethane	ug/L	10	9.8	98	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	10	13.2	132	70-130	IH,L1,N3
1,1-Dichloroethane	ug/L	10	8.7	87	70-130	
1,1-Dichloroethene	ug/L	10	8.9	89	70-130	
1,1-Dichloropropene	ug/L	10	9.8	98	70-130	
1,2,3-Trichlorobenzene	ug/L	10	10.7	107	70-130	
1,2,3-Trichloropropane	ug/L	10	10.3	103	70-130	
1,2,4-Trichlorobenzene	ug/L	10	9.1	91	70-130	
1,2,4-Trimethylbenzene	ug/L	10	9.9	99	70-130	
1,2-Dichlorobenzene	ug/L	10	10.7	107	70-130	
1,2-Dichloroethane	ug/L	10	9.2	92	70-130	
1,2-Dichloropropane	ug/L	10	9.7	97	70-130	
1,3,5-Trimethylbenzene	ug/L	10	9.9	99	70-130	
1,3-Dichlorobenzene	ug/L	10	10.7	107	70-130	
1,3-Dichloropropane	ug/L	10	10	100	70-130	
1,4-Dichlorobenzene	ug/L	10	10.5	105	70-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: POC/1,4-DIOX/PFAS 11/5
Pace Project No.: 70110734

LABORATORY CONTROL SAMPLE: 659510

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,2-Dichloropropane	ug/L	10	8.9	89	70-130	
2-Chlorotoluene	ug/L	10	9.4	94	70-130	
4-Chlorotoluene	ug/L	10	9.5	95	70-130	
Benzene	ug/L	10	9.7	97	70-130	
Bromobenzene	ug/L	10	10.9	109	70-130	
Bromochloromethane	ug/L	10	11.5	115	70-130	
Bromodichloromethane	ug/L	10	8.7	87	70-130	
Bromoform	ug/L	10	9.0	90	70-130	
Bromomethane	ug/L	10	16.0	160	70-130	IH,L1
Carbon tetrachloride	ug/L	10	9.0	90	70-130	
Chlorobenzene	ug/L	10	10.5	105	70-130	
Chlorodifluoromethane	ug/L	10	6.2	62	70-130	IH,L2,N3
Chloroethane	ug/L	10	10.9	109	70-130	
Chloroform	ug/L	10	10	100	70-130	
Chloromethane	ug/L	10	7.9	79	70-130	CL
cis-1,2-Dichloroethene	ug/L	10	9.9	99	70-130	
cis-1,3-Dichloropropene	ug/L	10	9.3	93	70-130	
Dibromochloromethane	ug/L	10	9.5	95	70-130	
Dibromomethane	ug/L	10	9.8	98	70-130	
Dichlorodifluoromethane	ug/L	10	6.8	68	70-130	L2
Ethylbenzene	ug/L	10	10.1	101	70-130	
Hexachloro-1,3-butadiene	ug/L	10	10.5	105	70-130	
Isopropylbenzene (Cumene)	ug/L	10	9.9	99	70-130	
m&p-Xylene	ug/L	20	21.0	105	70-130	
Methyl-tert-butyl ether	ug/L	10	18.2	182	70-130	L1
Methylene Chloride	ug/L	10	9.1	91	70-130	
n-Butylbenzene	ug/L	10	9.2	92	70-130	
n-Propylbenzene	ug/L	10	9.5	95	70-130	
o-Xylene	ug/L	10	10.2	102	70-130	
p-Isopropyltoluene	ug/L	10	10.1	101	70-130	
sec-Butylbenzene	ug/L	10	9.8	98	70-130	
Styrene	ug/L	10	10.4	104	70-130	
tert-Butylbenzene	ug/L	10	10	100	70-130	
Tetrachloroethene	ug/L	10	11.0	110	70-130	
Toluene	ug/L	10	9.7	97	70-130	
Total Trihalomethanes (Calc.)	ug/L		37.2			
trans-1,2-Dichloroethene	ug/L	10	9.0	90	70-130	
trans-1,3-Dichloropropene	ug/L	10	9.2	92	70-130	
Trichloroethene	ug/L	10	10.0	100	70-130	
Trichlorofluoromethane	ug/L	10	11.1	111	70-130	
Vinyl chloride	ug/L	10	9.8	98	70-130	
1,2-Dichlorobenzene-d4 (S)	%			104	70-130	
4-Bromofluorobenzene (S)	%			108	70-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: POC/1,4-DIOX/PFAS 11/5
Pace Project No.: 70110734

SAMPLE DUPLICATE: 660856

Parameter	Units	70110734001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50		20	
1,1,1-Trichloroethane	ug/L	<0.50	<0.50		20	
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50		20	
1,1,2-Trichloroethane	ug/L	<0.50	<0.50		20	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.50	<0.50		20	N3
1,1-Dichloroethane	ug/L	<0.50	<0.50		20	
1,1-Dichloroethene	ug/L	<0.50	<0.50		20	
1,1-Dichloropropene	ug/L	<0.50	<0.50		20	
1,2,3-Trichlorobenzene	ug/L	<0.50	<0.50		20	
1,2,3-Trichloropropane	ug/L	<0.50	<0.50		20	
1,2,4-Trichlorobenzene	ug/L	<0.50	<0.50		20	
1,2,4-Trimethylbenzene	ug/L	<0.50	<0.50		20	
1,2-Dichlorobenzene	ug/L	<0.50	<0.50		20	
1,2-Dichloroethane	ug/L	<0.50	<0.50		20	
1,2-Dichloropropane	ug/L	<0.50	<0.50		20	
1,3,5-Trimethylbenzene	ug/L	<0.50	<0.50		20	
1,3-Dichlorobenzene	ug/L	<0.50	<0.50		20	
1,3-Dichloropropane	ug/L	<0.50	<0.50		20	
1,4-Dichlorobenzene	ug/L	<0.50	<0.50		20	
2,2-Dichloropropane	ug/L	<0.50	<0.50		20	
2-Chlorotoluene	ug/L	<0.50	<0.50		20	
4-Chlorotoluene	ug/L	<0.50	<0.50		20	
Benzene	ug/L	<0.50	<0.50		20	
Bromobenzene	ug/L	<0.50	<0.50		20	
Bromochloromethane	ug/L	<0.50	<0.50		20	
Bromodichloromethane	ug/L	<0.50	<0.50		20	
Bromoform	ug/L	<0.50	<0.50		20	
Bromomethane	ug/L	<0.50	<0.50		20	
Carbon tetrachloride	ug/L	<0.50	<0.50		20	
Chlorobenzene	ug/L	<0.50	<0.50		20	
Chlorodifluoromethane	ug/L	<0.50	<0.50		20	N3
Chloroethane	ug/L	<0.50	<0.50		20	
Chloroform	ug/L	<0.50	<0.50		20	
Chloromethane	ug/L	<0.50	<0.50		20	CL
cis-1,2-Dichloroethene	ug/L	<0.50	<0.50		20	
cis-1,3-Dichloropropene	ug/L	<0.50	<0.50		20	
Dibromochloromethane	ug/L	<0.50	<0.50		20	
Dibromomethane	ug/L	<0.50	<0.50		20	
Dichlorodifluoromethane	ug/L	<0.50	<0.50		20	
Ethylbenzene	ug/L	<0.50	<0.50		20	
Hexachloro-1,3-butadiene	ug/L	<0.50	<0.50		20	
Isopropylbenzene (Cumene)	ug/L	<0.50	<0.50		20	
m&p-Xylene	ug/L	<0.50	<0.50		20	
Methyl-tert-butyl ether	ug/L	<0.50	<0.50		20	
Methylene Chloride	ug/L	<0.50	<0.50		20	
n-Butylbenzene	ug/L	<0.50	<0.50		20	
n-Propylbenzene	ug/L	<0.50	<0.50		20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: POC/1,4-DIOX/PFAS 11/5
Pace Project No.: 70110734

SAMPLE DUPLICATE: 660856

Parameter	Units	70110734001 Result	Dup Result	RPD	Max RPD	Qualifiers
o-Xylene	ug/L	<0.50	<0.50		20	
p-Isopropyltoluene	ug/L	<0.50	<0.50		20	
sec-Butylbenzene	ug/L	<0.50	<0.50		20	
Styrene	ug/L	<0.50	<0.50		20	
tert-Butylbenzene	ug/L	<0.50	<0.50		20	
Tetrachloroethene	ug/L	<0.50	<0.50		20	
Toluene	ug/L	<0.50	<0.50		20	
Total Trihalomethanes (Calc.)	ug/L	<0.50	<0.50		20	
trans-1,2-Dichloroethene	ug/L	<0.50	<0.50		20	
trans-1,3-Dichloropropene	ug/L	<0.50	<0.50		20	
Trichloroethene	ug/L	<0.50	<0.50		20	
Trichlorofluoromethane	ug/L	<0.50	<0.50		20	
Vinyl chloride	ug/L	<0.50	<0.50		20	
1,2-Dichlorobenzene-d4 (S)	%	83	82		20	
4-Bromofluorobenzene (S)	%	88	90		20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: POC/1,4-DIOX/PFAS 11/5
Pace Project No.: 70110734

QC Batch: 137515 Analysis Method: EPA 522
QC Batch Method: EPA 522 Analysis Description: 522 MSS 1,4 Dioxane
Associated Lab Samples: 70110734001, 70110734002

METHOD BLANK: 658357 Matrix: Drinking Water
Associated Lab Samples: 70110734001, 70110734002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	<0.020	0.020	11/07/19 18:07	
1,4-Dioxane-d8 (S)	%	85	70-130	11/07/19 18:07	

LABORATORY CONTROL SAMPLE: 658358

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	5	4.3	86	70-130	
1,4-Dioxane-d8 (S)	%			83	70-130	

MATRIX SPIKE SAMPLE: 658359

Parameter	Units	70110397003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	<0.020	5	5.6	113	70-130	E
1,4-Dioxane-d8 (S)	%				86	70-130	

SAMPLE DUPLICATE: 658360

Parameter	Units	70110527001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	0.12	0.11	4	20	
1,4-Dioxane-d8 (S)	%	85	86		20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: POC/1,4-DIOX/PFAS 11/5
Pace Project No.: 70110734

QC Batch: 585482
QC Batch Method: EPA 537
Analysis Method: EPA 537
Analysis Description: 537 PFOA Compounds, Water
Associated Lab Samples: 70110734001, 70110734002

METHOD BLANK: 3183699 Matrix: Water
Associated Lab Samples: 70110734001, 70110734002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Perfluorobutanesulfonic acid	ng/L	<2.0	2.0	11/13/19 21:50	
Perfluoroheptanoic acid	ng/L	<2.0	2.0	11/13/19 21:50	
Perfluorohexanesulfonic acid	ng/L	<2.0	2.0	11/13/19 21:50	
Perfluorononanoic acid	ng/L	<2.0	2.0	11/13/19 21:50	
Perfluorooctanesulfonic acid	ng/L	<2.0	2.0	11/13/19 21:50	
Perfluorooctanoic acid	ng/L	<2.0	2.0	11/13/19 21:50	
13C2-PFDA (S)	%	107	70-130	11/13/19 21:50	
13C2-PFHxA (S)	%	94	70-130	11/13/19 21:50	
HFPO-DAS (S)	%	97	70-130	11/13/19 21:50	
NEtFOSAA-d5 (S)	%	101	70-130	11/13/19 21:50	

LABORATORY CONTROL SAMPLE & LCSD: 3183700 3183701

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Perfluorobutanesulfonic acid	ng/L	8	8.4	8.2	105	103	70-130	3	30	
Perfluoroheptanoic acid	ng/L	8	8.1	8.4	101	105	70-130	4	30	
Perfluorohexanesulfonic acid	ng/L	8	8.0	7.7	100	97	70-130	3	30	
Perfluorononanoic acid	ng/L	8	8.4	8.1	105	101	70-130	4	30	
Perfluorooctanesulfonic acid	ng/L	8	7.3	8.1	91	101	70-130	10	30	
Perfluorooctanoic acid	ng/L	8	7.8	8.0	98	101	70-130	3	30	
13C2-PFDA (S)	%				100	105	70-130			
13C2-PFHxA (S)	%				102	102	70-130			
HFPO-DAS (S)	%				110	105	70-130			
NEtFOSAA-d5 (S)	%				104	106	70-130			

LABORATORY CONTROL SAMPLE: 3183702

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Perfluorobutanesulfonic acid	ng/L	2	2.2	110	50-150	
Perfluoroheptanoic acid	ng/L	2	2.2	109	50-150	
Perfluorohexanesulfonic acid	ng/L	2	<2.0	87	50-150	
Perfluorononanoic acid	ng/L	2	2.1	107	50-150	
Perfluorooctanesulfonic acid	ng/L	2	<2.0	99	50-150	
Perfluorooctanoic acid	ng/L	2	2.3	114	50-150	
13C2-PFDA (S)	%			104	70-130	
13C2-PFHxA (S)	%			107	70-130	
HFPO-DAS (S)	%			112	70-130	
NEtFOSAA-d5 (S)	%			110	70-130	

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.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALIFIERS

Project: POC/1,4-DIOX/PFAS 11/5
Pace Project No.: 70110734

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

LABORATORIES

PACE-MV	Pace Analytical Services - Melville
PASI-O	Pace Analytical Services - Ormond Beach

SAMPLE QUALIFIERS

Sample: 70110734001
[1] ALKEN AVE
Sample: 70110734002
[1] ALKEN AVE

ANALYTE QUALIFIERS

CL	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
IH	This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
N3	Accreditation is not offered by the relevant laboratory accrediting body for this parameter.

Pace Analytical Services, LLC
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Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: POC/1,4-DIOX/PFAS 11/5
Pace Project No.: 70110734

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70110734001	**TT102D2**	EPA 537	585482	EPA 537	586999
70110734002	**TT102D1**	EPA 537	585482	EPA 537	586999
70110734001	**TT102D2**	EPA 522	137515	EPA 522	137674
70110734002	**TT102D1**	EPA 522	137515	EPA 522	137674
70110734001	**TT102D2**	EPA 524.2	137728		
70110734002	**TT102D1**	EPA 524.2	137728		

WO#:70110734

70110734

Sample Request Form
PUBLIC WATER SUPPLIER

Date: 11/5/19
Collected By: R. Grimes
Accepted By: [signature] Pace 11/5/19 14:36
Cooler Temp: 1.0 °C (W)

❑ WELL OFF LINE

❑ WELL RUN TO SYSTEM

☑ YES ❑ NO VOC'S PRESERVED WITH HCl

Client Info:
Name or Code: Massapequa Water Dist
Address: 84 Grand Ave
Massapequa NY 11758
Phone #: 516 798 5266
Attn: Stan
Proj. # or (Name):
Bill To:
Copies To:

Sample Types	Purpose	Origin	Treatment Types
PW - Potable Water	RO - Routine	D - Distribution	AST - Air Stripper
GW - Groundwater	RE - Resample	RW - Raw Well	GAC - Granular Activated Charcoal
SW - Surface Water	S - Special	TW - Treated Well	N - Nitrate Removal Plant
WW - Waste Water		T - Tank	FE - Iron Removal Plant
AQ - Aqueous		MW - Monitoring Well	O - Other
S - Soil		I - Influent	
		E - Effluent	

Sample Info:

Date/Time Collected	Sample Type	Location	Origin	Treatment Type	Purpose	Field Readings Cl_2	Field Readings pH/Temp	Analysis	Lab No.
11/5/19									
12:50	GW	TT102 D2 Aiken Ave	MW	/	S	—	—	VOC, 1,4 Dioxane PFOA/PFOS	001
13:10	GW	TT102 D1 Aiken Ave	MW	/	S	—	—	VOC, 1,4 Dioxane PFOA/PFOS	002

Remarks:

Sample Condition Upon Receipt

Pace Analytical

WO#:70110734
PM: SWM Due Date: 11/14/19
CLIENT: MASS

Client Name: MASS

Proj

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No Seals intact: ☐ Yes ☑ No

Temperature Blank Present: ☐ Yes ☑ No

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ Ziploc ☐ None ☐ Other

Type of Ice: (Wet) Blue None

Thermometer Used: TH091 Correction Factor: +0.2

☐ Samples on ice, cooling process has begun

Cooler Temperature (°C): 1.0 Cooler Temperature Corrected (°C): 1.2

Date/Time 5035A kits placed in freezer

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☐ N/A, water sample)

Date and Initials of person examining contents: VW 11/5/19

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ YES ☐ NO

Did samples orignate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑Yes	☐No		1.
Chain of Custody Filled Out:	☑Yes	☐No		2.
Chain of Custody Relinquished:	☑Yes	☐No		3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No		5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No		6.
Rush Turn Around Time Requested:	☐Yes	☑No		7.
Sufficient Volume: (Triple volume provided for MS/MSD)	☑Yes	☐No		8.
Correct Containers Used:	☑Yes	☐No		9.
-Pace Containers Used:	☑Yes	☐No		
Containers Intact:	☑Yes	☐No		10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC: Includes date/time/ID/Analysis Matrix SL (WT) OIL	☑Yes	☐No		12.
All containers needing preservation have been checked pH paper Lot #	☐Yes	☐No	☑N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NaOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	☐Yes	☐No	☑N/A	Initial when completed: / Lot # of added preservative: / Date/Time preservative added
Samples checked for dechlorination: KI starch test strips Lot # Residual chlorine strips Lot #	☐Yes	☐No	☑N/A	14. Positive for Res. Chlorine? Y N
Headspace in VOA Vials (>6mm):	☐Yes	☑No	☐N/A	15.
Trip Blank Present:	☐Yes	☑No	☐N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if applicable):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

* PM (Project Manager) review is documented electronically in LIMS.

F-LI-C-002-rev.02

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www.pacelabs.com

Laboratory Results

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Sample Information:
Type: Drinking Water
Origin: Treated Well
Special

Massapequa Water District
84 Grand Ave.
Massapequa, NY 11758
Attn To : Stan Carey
Federal ID : 2902837
Collected : 11/05/2019 12:50 PM Point
Received : 11/05/2019 02:36 PM Location
Collected By CLIENT
Sample Comments:
ALKEN AVE

Lab No. : 70110734001
Client Sample ID.: TT102D2

Analytical Method:EPA 522 Prep Method: EPA 522 Prep Date: 11/07/2019 9:45 AM

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
1,4-Dioxane (p-Dioxane)	<0.020		1	ug/L		11/07/2019 8:20 PM	001 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	86%		1	%REC		11/07/2019 8:20 PM	001 AG2R1/2

Analytical Method:EPA 524.2

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
1,1,1-Trichloroethane	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
1,1,2,2-Tetrachloroethane	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
1,1,2-Trichloroethane	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
1,1,2-Trichlorotrifluoroethane	<0.50	L1,N3	1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
1,1-Dichloroethane	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
1,1-Dichloroethene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
1,1-Dichloropropene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
1,2,3-Trichlorobenzene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
1,2,3-Trichloropropane	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
1,2,4-Trichlorobenzene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
1,2,4-Trimethylbenzene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
1,2-Dichlorobenzene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
1,2-Dichloroethane	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
1,2-Dichloropropane	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
1,3,5-Trimethylbenzene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
1,3-Dichlorobenzene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
1,3-Dichloropropane	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
1,4-Dichlorobenzene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
2,2-Dichloropropane	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
2-Chlorotoluene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
4-Chlorotoluene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Benzene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Bromobenzene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Bromochloromethane	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Bromodichloromethane	<0.50		1	ug/L		11/08/2019 12:23	001 VG9C1/2
Bromoform	<0.50		1	ug/L		11/08/2019 12:23	001 VG9C1/2
Bromomethane	<0.50	L1	1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Carbon tetrachloride	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Chlorobenzene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Chlorodifluoromethane	<0.50	L2,N3	1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Chloroethane	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2

Qualifiers:
DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range
U - Indicates the compound was analyzed for, but not detected
See qualifiers page for additional qualifier definitions.

Result(s) reported meet(s) NYS Regulatory Limit(s).
Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

Kimberley Mack

Kimberley Mack

Test results meet the requirements of NELAC unless otherwise noted.

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Laboratory Results

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Sample Information:
Type: Drinking Water
Origin: Treated Well
Special

Massapequa Water District
84 Grand Ave.
Massapequa, NY 11758
Attn To : Stan Carey
Federal ID : 2902837
Collected : 11/05/2019 12:50 PM Point
Received : 11/05/2019 02:36 PM Location
Collected By CLIENT

Lab No. : 70110734001
Client Sample ID.: TT102D2

Sample Comments:
ALKEN AVE

Chloroform	<0.50		1	ug/L		11/08/2019 12:23	001 VG9C1/2
Chloromethane	<0.50	CL	1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Dibromochloromethane	<0.50		1	ug/L		11/08/2019 12:23	001 VG9C1/2
Dibromomethane	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Dichlorodifluoromethane	<0.50	L2	1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Ethylbenzene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Hexachloro-1,3-butadiene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Isopropylbenzene (Cumene)	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Methyl-tert-butyl ether	<0.50	L1	1	ug/L	10	11/08/2019 12:23	001 VG9C1/2
Methylene Chloride	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Styrene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Tetrachloroethene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Toluene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Total Trihalomethanes (Calc.)	<0.50		1	ug/L	80	11/08/2019 12:23	001 VG9C1/2
Trichloroethene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Trichlorofluoromethane	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Vinyl chloride	<0.50		1	ug/L	2	11/08/2019 12:23	001 VG9C1/2
cis-1,2-Dichloroethene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
cis-1,3-Dichloropropene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
m&p-Xylene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
n-Butylbenzene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
n-Propylbenzene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
o-Xylene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
p-Isopropyltoluene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
sec-Butylbenzene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
tert-Butylbenzene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
trans-1,2-Dichloroethene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
trans-1,3-Dichloropropene	<0.50		1	ug/L	5	11/08/2019 12:23	001 VG9C1/2
Surr: 1,2-Dichlorobenzene-d4 (S)	83%		1	%REC		11/08/2019 12:23	001 VG9C1/2
Surr: 4-Bromofluorobenzene (S)	88%		1	%REC		11/08/2019 12:23	001 VG9C1/2

Analytical Method: EPA 537 Prep Method: EPA 537 Prep Date: 11/08/2019 8:54 AM

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
Perfluorobutanesulfonic acid	<1.9		1	ng/L		11/13/2019 11:38	
Perfluoroheptanoic acid	<1.9		1	ng/L		11/13/2019 11:38	
Perfluorohexanesulfonic acid	<1.9		1	ng/L		11/13/2019 11:38	
Perfluorononanoic acid	<1.9		1	ng/L		11/13/2019 11:38	
Perfluorooctanesulfonic acid	<1.9		1	ng/L		11/13/2019 11:38	
Perfluorooctanoic acid	<1.9		1	ng/L		11/13/2019 11:38	
Surr: 13C2-PFDA (S)	98%		1	%REC		11/13/2019 11:38	

Qualifiers:
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ND - Not Detected at or above adjusted reporting limit.
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Result(s) reported meet(s) NYS Regulatory Limit(s).
Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

Kimberley Mack

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Laboratory Results

Results for the samples and analytes requested

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Sample Information:
Type: Drinking Water
Origin: Treated Well
Special

Massapequa Water District
84 Grand Ave.
Massapequa, NY 11758
Attn To : Stan Carey
Federal ID : 2902837
Collected : 11/05/2019 12:50 PM Point
Received : 11/05/2019 02:36 PM Location
Collected By CLIENT
Sample Comments:
ALKEN AVE

Lab No. : 70110734001
Client Sample ID.: TT102D2

Surr: 13C2-PFHxA (S)	97%	1	%REC	11/13/2019 11:38
Surr: HFPO-DAS (S)	101%	1	%REC	11/13/2019 11:38
Surr: NEtFOSAA-d5 (S)	104%	1	%REC	11/13/2019 11:38

Qualifiers:
DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
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Result(s) reported meet(s) NYS Regulatory Limit(s).
Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

Kimberley Mack

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Sample Information:
Type: Drinking Water
Origin: Treated Well
Special

Massapequa Water District
84 Grand Ave.
Massapequa, NY 11758
Attn To : Stan Carey
Federal ID : 2902837
Collected : 11/05/2019 01:10 PM Point
Received : 11/05/2019 02:36 PM Location
Collected By CLIENT
Sample Comments:
ALKEN AVE

Lab No. : 70110734002
Client Sample ID.: TT102D1

Analytical Method:EPA 522 Prep Method: EPA 522 Prep Date: 11/07/2019 9:45 AM

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
1,4-Dioxane (p-Dioxane)	0.67		1	ug/L		11/07/2019 8:43 PM	002 AG2R1/2
Surr: 1,4-Dioxane-d8 (S)	84%		1	%REC		11/07/2019 8:43 PM	002 AG2R1/2

Analytical Method:EPA 524.2

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
1,1,1,2-Tetrachloroethane	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
1,1,1-Trichloroethane	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
1,1,2,2-Tetrachloroethane	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
1,1,2-Trichloroethane	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
1,1,2-Trichlorotrifluoroethane	<0.50	L1,N3	1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
1,1-Dichloroethane	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
1,1-Dichloroethene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
1,1-Dichloropropene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
1,2,3-Trichlorobenzene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
1,2,3-Trichloropropane	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
1,2,4-Trichlorobenzene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
1,2,4-Trimethylbenzene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
1,2-Dichlorobenzene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
1,2-Dichloroethane	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
1,2-Dichloropropane	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
1,3,5-Trimethylbenzene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
1,3-Dichlorobenzene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
1,3-Dichloropropane	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
1,4-Dichlorobenzene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
2,2-Dichloropropane	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
2-Chlorotoluene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
4-Chlorotoluene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Benzene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Bromobenzene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Bromochloromethane	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Bromodichloromethane	<0.50		1	ug/L		11/08/2019 12:50	002 VG9C1/2
Bromoform	<0.50		1	ug/L		11/08/2019 12:50	002 VG9C1/2
Bromomethane	<0.50	L1	1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Carbon tetrachloride	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Chlorobenzene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Chlorodifluoromethane	<0.50	L2,N3	1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Chloroethane	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2

Qualifiers:
DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.Estimated value - below calibration range
U - Indicates the compound was analyzed for, but not detected
See qualifiers page for additional qualifier definitions.

Result(s) reported meet(s) NYS Regulatory Limit(s).
Result(s) flagged with * Exceed NYS Regulatory Limit(s). Limit Noted.

Kimberley Mack

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Test results meet the requirements of NELAC unless otherwise noted.

Pace Analytical®
575 Broad Hollow Road, Melville, NY 11747
TEL: (631) 694-3040 FAX: (631) 420-8436
www.pacelabs.com

Laboratory Results

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests

Sample Information:
Type: Drinking Water
Origin: Treated Well
Special

Massapequa Water District
84 Grand Ave.
Massapequa, NY 11758
Attn To : Stan Carey
Federal ID : 2902837
Collected : 11/05/2019 01:10 PM Point
Received : 11/05/2019 02:36 PM Location
Collected By CLIENT

Lab No. : 70110734002
Client Sample ID.: TT102D1

Sample Comments:
ALKEN AVE

Chloroform	<0.50		1	ug/L		11/08/2019 12:50	002 VG9C1/2
Chloromethane	<0.50	CL	1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Dibromochloromethane	<0.50		1	ug/L		11/08/2019 12:50	002 VG9C1/2
Dibromomethane	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Dichlorodifluoromethane	<0.50	L2	1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Ethylbenzene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Hexachloro-1,3-butadiene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Isopropylbenzene (Cumene)	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Methyl-tert-butyl ether	<0.50	L1	1	ug/L	10	11/08/2019 12:50	002 VG9C1/2
Methylene Chloride	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Styrene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Tetrachloroethene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Toluene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Total Trihalomethanes (Calc.)	<0.50		1	ug/L	80	11/08/2019 12:50	002 VG9C1/2
Trichloroethene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Trichlorofluoromethane	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Vinyl chloride	<0.50		1	ug/L	2	11/08/2019 12:50	002 VG9C1/2
cis-1,2-Dichloroethene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
cis-1,3-Dichloropropene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
m&p-Xylene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
n-Butylbenzene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
n-Propylbenzene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
o-Xylene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
p-Isopropyltoluene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
sec-Butylbenzene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
tert-Butylbenzene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
trans-1,2-Dichloroethene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
trans-1,3-Dichloropropene	<0.50		1	ug/L	5	11/08/2019 12:50	002 VG9C1/2
Surr: 1,2-Dichlorobenzene-d4 (S)	80%		1	%REC		11/08/2019 12:50	002 VG9C1/2
Surr: 4-Bromofluorobenzene (S)	88%		1	%REC		11/08/2019 12:50	002 VG9C1/2

Analytical Method: EPA 537 Prep Method: EPA 537 Prep Date: 11/08/2019 8:54 AM

Parameter(s)	Results	Qualifier	D.F.	Units	Limit	Analyzed:	Container:
Perfluorobutanesulfonic acid	<1.8		1	ng/L		11/13/2019 11:56	
Perfluoroheptanoic acid	<1.8		1	ng/L		11/13/2019 11:56	
Perfluorohexanesulfonic acid	<1.8		1	ng/L		11/13/2019 11:56	
Perfluorononanoic acid	<1.8		1	ng/L		11/13/2019 11:56	
Perfluorooctanesulfonic acid	<1.8		1	ng/L		11/13/2019 11:56	
Perfluorooctanoic acid	<1.8		1	ng/L		11/13/2019 11:56	
Surr: 13C2-PFDA (S)	98%		1	%REC		11/13/2019 11:56	

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Attn To : Stan Carey
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Collected : 11/05/2019 01:10 PM Point
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Collected By CLIENT
Sample Comments:
ALKEN AVE

Lab No. : 70110734002
Client Sample ID.: TT102D1

Surr: 13C2-PFHxA (S)	105%	1	%REC	11/13/2019 11:56
Surr: HFPO-DAS (S)	110%	1	%REC	11/13/2019 11:56
Surr: NEtFOSAA-d5 (S)	99%	1	%REC	11/13/2019 11:56

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WorkOrder :
70110734

Laboratory Certifications

Pace Analytical Services Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
Arizona Certification# AZ0819
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

Pace Analytical Services Long Island
575 Broad Hollow Rd, Melville, NY 11747

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WorkOrder :
70110734

Laboratory Certifications

Pace Analytical Services Long Island

New York Certification #: 10478 Primary Accrediting Body
New Jersey Certification #: NY158
Pennsylvania Certification #: 68-00350
Connecticut Certification #: PH-0435
Maryland Certification #: 208
Rhode Island Certification #: LAO00340
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987

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WorkOrder :
70110734

Qualifiers

CL - The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.
L1 - Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
L2 - Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
N3 - Accreditation is not offered by the relevant laboratory accrediting body for this parameter.

WO#:70110734

70110734

Sample Request Form
PUBLIC WATER SUPPLIER

Date: 11/5/19

Collected By: R. Grimes

Accepted By: [signature] Pace 11/5/19 14:36

Cooler Temp: 1.0 °C (W)

☐ WELL OFF LINE

☐ WELL RUN TO SYSTEM

☑ YES ☐ NO VOC'S PRESERVED WITH HCl

Client Info:

Name or Code: Massapequa Water Dist

Address: 84 Grand Ave, Massapequa NY 11758

Phone #: 516 798 5266

Attn: Stan

Proj. # or (Name):

Bill To:

Copies To:

Sample Types	Purpose	Origin	Treatment Types
PW - Potable Water	RO - Routine	D - Distribution	AST - Air Stripper
GW - Groundwater	RE - Resample	RW - Raw Well	GAC - Granular Activated Charcoal
SW - Surface Water	S - Special	TW - Treated Well	N - Nitrate Removal Plant
WW - Waste Water		T - Tank	FE - Iron Removal Plant
AQ - Aqueous		MW - Monitoring Well	O - Other
S - Soil		I - Influent	
		E - Effluent	

Sample Info:

Date/Time Collected	Sample Type	Location	Origin	Treatment Type	Purpose	Field Readings Cl_2	Field Readings pH/Temp	Analysis	Lab No.
11/5/19									
12:50	GW	TT102 D2 Alken Ave	MW	/	S	—	—	VOC, 1,4 Dioxane PFOA/PFOS	001
13:10	GW	TT102 D1 Alken Ave	MW	/	S	—	—	VOC, 1,4 Dioxane PFOA/PFOS	002

Remarks:

Pace Analytical

Sample Condition Upon Receipt

WO#:70110734
PM: SWM Due Date: 11/14/19
CLIENT: MASS

Client Name: MASS

Proj

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No Seals intact: ☐ Yes ☑ No

Temperature Blank Present: ☐ Yes ☑ No

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ Ziploc ☐ None ☐ Other

Type of Ice: (Wet) Blue None

Thermometer Used: TH091 Correction Factor: +0.2

☐ Samples on ice, cooling process has begun

Cooler Temperature (°C): 1.0 Cooler Temperature Corrected (°C): 1.2

Date/Time 5035A kits placed in freezer

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☐ N/A, water sample)

Date and Initials of person examining contents: V.W 11/5/19

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ YES ☐ NO

Did samples orignate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑Yes	☐No		1.
Chain of Custody Filled Out:	☑Yes	☐No		2.
Chain of Custody Relinquished:	☑Yes	☐No		3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No		5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No		6.
Rush Turn Around Time Requested:	☐Yes	☑No		7.
Sufficient Volume: (Triple volume provided for MS/MSD)	☑Yes	☐No		8.
Correct Containers Used:	☑Yes	☐No		9.
-Pace Containers Used:	☑Yes	☐No		
Containers Intact:	☑Yes	☐No		10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC: Includes date/time/ID/Analysis Matrix SL (WT) OIL	☑Yes	☐No		12.
All containers needing preservation have been checked pH paper Lot #	☐Yes	☐No	☑N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	☐Yes	☐No	☑N/A	Initial when completed: / Lot # of added preservative: / Date/Time preservative added
Samples checked for dechlorination: KI starch test strips Lot # Residual chlorine strips Lot #	☐Yes	☐No	☑N/A	14. Positive for Res. Chlorine? Y N
Headspace in VOA Vials (>6mm):	☐Yes	☑No	☐N/A	15.
Trip Blank Present:	☐Yes	☑No	☐N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if applicable):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

* PM (Project Manager) review is documented electronically in LIMS.

F-LI-C-002-rev.02