Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A0991

Project Description

Wells - Quarterly

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Thursday, January 21, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A0991

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Quarterly

Project / PO Number: 346346
Received: 01/12/2021
Reported: 01/21/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well A8	D1A0991-01	Groundwater	Grab		01/12/21 10:54	01/12/21 16:05
Well A8	D1A0991-02	Groundwater	Grab		01/12/21 10:54	01/12/21 16:05
Well A8 (filtered)	D1A0991-03	Groundwater	Grab		01/12/21 10:54	01/12/21 16:05
Well A8	D1A0991-04	Groundwater	Grab		01/12/21 10:54	01/12/21 16:05
Well A8	D1A0991-05	Groundwater	Grab		01/12/21 10:54	01/12/21 16:05
Well A8	D1A0991-06	Groundwater	Grab		01/12/21 10:54	01/12/21 16:05
Well A8	D1A0991-07	Groundwater	Grab		01/12/21 10:54	01/12/21 16:05

CERTIFICATE OF ANALYSIS

D1A0991

Analytical Testing Parameters

Client Sample ID: Well A8
Sample Matrix: Groundwater
Lab Sample ID: D1A0991-01
Collected By: Customer
Collection Date: 01/12/2021 10:54

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 351.1								
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L	1		01/15/21 0932	01/15/21 1453	CLW
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**2.79**	0.0213	mg/L	2		01/13/21 1800	01/14/21 1101	CLW

Client Sample ID: Well A8
Sample Matrix: Groundwater
Lab Sample ID: D1A0991-02
Collected By: Customer
Collection Date: 01/12/2021 10:54

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-NO_3^- F-2011								
Nitrate as N	**2.13**	0.0500	mg/L	1			01/12/21 1928	DJM
Nitrite as N	<0.0100	0.0100	mg/L	1	**Y1**		01/12/21 1928	DJM

Client Sample ID: Well A8 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1A0991-03
Collected By: Customer
Collection Date: 01/12/2021 10:54

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**2.78**	0.0200	mg/L	2		01/12/21 1745	01/12/21 1929	DJM

Client Sample ID: Well A8
Sample Matrix: Groundwater
Lab Sample ID: D1A0991-04
Collected By: Customer
Collection Date: 01/12/2021 10:54

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 2320 B-2011								
Alkalinity to pH 4.5	**90.0**	1.00	mg CaCO3/L	1			01/15/21 1635	MAD

Client Sample ID:	Well A8		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A0991-05	**Collection Date:**	01/12/2021 10:54

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-Cl E-2011								
Chloride	**182**	8.00	mg/L	4			01/18/21 1626	CLW

Client Sample ID:	Well A8		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A0991-06	**Collection Date:**	01/12/2021 10:54

Metals Total by ICP	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.7, Rv. 4.4 (1994)								
Boron	**0.0638**	0.0050	mg/L	1	**Y1**	01/14/21 1433	01/15/21 1219	JDF
Copper	**0.0020**	0.0020	mg/L	1	**R3**	01/14/21 1433	01/15/21 1219	JDF
Sodium	**99.7**	1.00	mg/L	1		01/14/21 1433	01/15/21 1219	JDF

CERTIFICATE OF ANALYSIS

D1A0991

Client Sample ID:	Well A8		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A0991-07	**Collection Date:**	01/12/2021 10:54

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acetone	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1613	JAN
Acrolein	<20.0	20.0	ug/L	1			01/14/21 1348	JAN
Acrylonitrile	<20.0	20.0	ug/L	1			01/19/21 1613	JAN
Benzene	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
Bromodichloromethane	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
Bromoform	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
Bromomethane	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
2-Butanone (MEK)	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1613	JAN
Carbon disulfide	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1613	JAN
Carbon tetrachloride	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
Chlorobenzene	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	1			01/14/21 1348	JAN
Chloroform	<4.00	4.00	ug/L	1			01/19/21 1613	JAN
Chloromethane	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
Dibromochloromethane	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1613	JAN
1,2-Dichlorobenzene	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
1,3-Dichlorobenzene	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
1,4-Dichlorobenzene	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1613	JAN
1,2-Dichloroethane	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
1,1-Dichloroethane	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
cis-1,2-Dichloroethene	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1613	JAN
1,1-Dichloroethene	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
trans-1,2-Dichloroethene	<4.00	4.00	ug/L	1			01/19/21 1613	JAN
1,2-Dichloropropane	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
cis-1,3-Dichloropropene	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
trans-1,3-Dichloropropene	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
Ethylbenzene	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
2-Hexanone (MBK)	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1613	JAN
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1613	JAN
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L	1			01/19/21 1613	JAN
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1613	JAN
Styrene	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1613	JAN
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
Tetrachloroethene	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
Toluene	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
1,1,2-Trichloroethane	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
1,1,1-Trichloroethane	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
Trichloroethene	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L	1			01/19/21 1613	JAN

CERTIFICATE OF ANALYSIS

D1A0991

Client Sample ID:	Well A8		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A0991-07	**Collection Date:**	01/12/2021 10:54

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Vinyl chloride	<5.00	5.00	ug/L	1			01/19/21 1613	JAN
m,p-Xylene	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1613	JAN
o-Xylene	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1613	JAN
Vinyl acetate	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1613	JAN
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 70-130	% Rec	1			01/19/21 1613	JAN
Surrogate: 1,2-Dichloroethane-d4	99.6	Limit: 70-130	% Rec	1			01/14/21 1348	JAN
Surrogate: Toluene-d8	101	Limit: 70-130	% Rec	1			01/14/21 1348	JAN
Surrogate: Toluene-d8	104	Limit: 70-130	% Rec	1			01/19/21 1613	JAN
Surrogate: Pentafluorobenzene	85.4	Limit: 70-130	% Rec	1			01/14/21 1348	JAN

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-$NO3^-$ F-2011	DA10585	DA10585-DUP1	D1A0933-01
		DA10585-DUP1	D1A0933-01
		DA10585-MS1	D1A0933-01
		DA10585-MS1	D1A0933-01
		DA10585-MSD1	D1A0933-01
		DA10585-MSD1	D1A0933-01
		DA10585-BS1	
		DA10585-BS2	
		DA10585-BLK1	
		DA10585-BLK1	
		D1A0991-02	Well A8
		D1A0991-02	Well A8

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DA10618	DA10618-BLK1	
		DA10618-BS1	
		DA10618-MS2	D1A0858-05
		D1A0991-03	Well A8 (filtered)
		DA10618-DUP1	D1A0858-04
		DA10618-MS1	D1A0858-04

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DA10683	DA10683-BS1	
		DA10683-BLK1	
		D1A0991-01	Well A8
		DA10683-DUP1	D1A0991-01
		DA10683-MS2	L1A0117-01
		DA10683-MS1	D1A0991-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.7, Rv. 4.4 (1994)	DA10755	DA10755-BLK1	
		DA10755-BS1	
		D1A0991-06	Well A8
		D1A0991-06	Well A8
		DA10755-DUP1	D1A0991-06
		DA10755-MS1	D1A1127-09
		DA10755-MS2	L1A0151-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 351.1	DA10811	DA10811-BS1	
		D1A0991-01	Well A8

EPA 351.1	DA10811	DA10811-MS1	D1A0991-01
		DA10811-MS2	D1A0994-01
		DA10811-DUP1	D1A0991-01
		DA10811-BLK1	

Method	Batch	Laboratory ID	Client / Source ID
SM 2320 B-2011	DA10868	DA10868-BS1	
		DA10868-DUP1	D1A0979-08
		DA10868-BLK1	
		D1A0991-04	Well A8

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-Cl E-2011	DA10893	DA10893-BS1	
		DA10893-BLK1	
		DA10893-DUP1	D1A1288-05
		DA10893-MS1	D1A1288-05
		DA10893-MSD1	D1A1288-05
		D1A0991-05	Well A8

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DA10912	DA10912-BS1	
		DA10912-BLK1	
		D1A0991-07	Well A8
		DA10912-MS1	D1A0994-07
		DA10912-MSD1	D1A0994-07

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DA11088	DA11088-BLK1	
		D1A0991-07	Well A8
		DA11088-MS1	D1A0991-07
		DA11088-MSD1	D1A0991-07

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10585 - Wet Chem - W - SM 4500-NO_3^- F-2011										
Blank (DA10585-BLK1)			Prepared & Analyzed: 01/12/2021							
Nitrite as N	<0.0100	0.0100	mg/L							
Nitrate as N	<0.0500	0.0500	mg/L							
LCS (DA10585-BS1)			Prepared & Analyzed: 01/12/2021							
Nitrate as N	5.24	0.0500	mg/L	5.00		105	90-110			
LCS (DA10585-BS2)			Prepared & Analyzed: 01/12/2021							
Nitrite as N	0.972	0.0100	mg/L	1.00		97.2	90-110			
Duplicate (DA10585-DUP1)		**Source: D1A0933-01**	Prepared & Analyzed: 01/12/2021							

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10585 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Duplicate (DA10585-DUP1)		**Source: D1A0933-01**	Prepared & Analyzed: 01/12/2021							
Nitrite as N	<0.0100	0.0100	mg/L		ND				20	R3
Nitrate as N	<0.0500	0.0500	mg/L		ND				20	
Matrix Spike (DA10585-MS1)		**Source: D1A0933-01**	Prepared & Analyzed: 01/12/2021							
Nitrite as N	0.989	0.0100	mg/L	1.00	ND	98.9	75-125			
Nitrate as N	4.98	0.0500	mg/L	5.00	ND	99.5	75-125			
Matrix Spike Dup (DA10585-MSD1)		**Source: D1A0933-01**	Prepared & Analyzed: 01/12/2021							
Nitrite as N	0.977	0.0100	mg/L	1.00	ND	97.7	75-125	1.29	20	
Nitrate as N	4.94	0.0500	mg/L	5.00	ND	98.7	75-125	0.825	20	
Batch DA10618 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10618-BLK1)			Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DA10618-BS1)			Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	0.988	0.0100	mg/L	1.00		98.7	90-110			
Duplicate (DA10618-DUP1)		**Source: D1A0858-04**	Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	4.00	0.0400	mg/L		4.00			0.125	20	
Matrix Spike (DA10618-MS1)		**Source: D1A0858-04**	Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	4.98	0.0400	mg/L	1.00	4.00	98.3	90-110			
Matrix Spike (DA10618-MS2)		**Source: D1A0858-05**	Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	1.24	0.0100	mg/L	1.00	0.286	94.8	90-110			
Batch DA10683 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10683-BLK1)			Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DA10683-BS1)			Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	0.983	0.0106	mg/L	1.00		98.3	90-110			
Duplicate (DA10683-DUP1)		**Source: D1A0991-01**	Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	2.73	0.0213	mg/L		2.79			1.92	20	
Matrix Spike (DA10683-MS1)		**Source: D1A0991-01**	Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	4.06	0.0425	mg/L	1.25	2.79	102	90-110			
Matrix Spike (DA10683-MS2)		**Source: L1A0117-01**	Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	2.58	0.0213	mg/L	1.25	1.36	97.4	90-110			
Batch DA10811 - Wet-Digestion-W - EPA 351.1										
Blank (DA10811-BLK1)			Prepared & Analyzed: 01/15/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L							
LCS (DA10811-BS1)			Prepared & Analyzed: 01/15/2021							
Total Kjeldahl Nitrogen (TKN)	5.01	0.200	mg/L	5.00		100	90-110			
Duplicate (DA10811-DUP1)		**Source: D1A0991-01**	Prepared & Analyzed: 01/15/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L		ND				20	

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10811 - Wet-Digestion-W - EPA 351.1										
Matrix Spike (DA10811-MS1)		**Source: D1A0991-01**		Prepared & Analyzed: 01/15/2021						
Total Kjeldahl Nitrogen (TKN)	10.1	0.200	mg/L	10.0	ND	101	90-110			
Matrix Spike (DA10811-MS2)		**Source: D1A0994-01**		Prepared & Analyzed: 01/15/2021						
Total Kjeldahl Nitrogen (TKN)	10.2	0.200	mg/L	10.0	ND	102	90-110			
Batch DA10868 - Wet Chem - W - SM 2320 B-2011										
Blank (DA10868-BLK1)				Prepared & Analyzed: 01/15/2021						
Alkalinity to pH 4.5	<1.00	1.00	mg CaCO3/ L							
LCS (DA10868-BS1)				Prepared & Analyzed: 01/15/2021						
Alkalinity to pH 4.5	50.0	1.00	mg CaCO3/ L	50.0		100	90-110			
Duplicate (DA10868-DUP1)		**Source: D1A0979-08**		Prepared & Analyzed: 01/15/2021						
Alkalinity to pH 4.5	47.5	1.00	mg CaCO3/ L		47.5			0.00	20	
Batch DA10893 - Wet Chem - W - SM 4500-Cl E-2011										
Blank (DA10893-BLK1)				Prepared & Analyzed: 01/18/2021						
Chloride	<2.00	2.00	mg/L							
LCS (DA10893-BS1)				Prepared & Analyzed: 01/18/2021						
Chloride	19.5	2.00	mg/L	20.0		97.4	90-110			
Duplicate (DA10893-DUP1)		**Source: D1A1288-05**		Prepared & Analyzed: 01/18/2021						
Chloride	13.8	2.00	mg/L		13.8			0.0153	20	
Matrix Spike (DA10893-MS1)		**Source: D1A1288-05**		Prepared & Analyzed: 01/18/2021						
Chloride	34.2	2.00	mg/L	20.0	13.8	102	75-125			
Matrix Spike Dup (DA10893-MSD1)		**Source: D1A1288-05**		Prepared & Analyzed: 01/18/2021						
Chloride	34.6	2.00	mg/L	20.0	13.8	104	75-125	0.964	20	

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10755 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DA10755-BLK1)				Prepared: 01/14/2021 Analyzed: 01/15/2021						
Boron	<0.0050	0.0050	mg/L							
Copper	<0.0020	0.0020	mg/L							
Sodium	<1.00	1.00	mg/L							
LCS (DA10755-BS1)				Prepared: 01/14/2021 Analyzed: 01/15/2021						
Boron	0.495	0.0050	mg/L	0.500		99.0	85-115			
Copper	0.519	0.0020	mg/L	0.500		104	85-115			
Sodium	10.4	1.00	mg/L	10.5		98.8	85-115			
Duplicate (DA10755-DUP1)		**Source: D1A0991-06**		Prepared: 01/14/2021 Analyzed: 01/15/2021						

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10755 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Duplicate (DA10755-DUP1)	**Source: D1A0991-06**		Prepared: 01/14/2021 Analyzed: 01/15/2021							
Boron	0.0634	0.0050	mg/L		0.0638			0.605	20	
Copper	<0.0020	0.0020	mg/L		0.0020			200	20	R3
Sodium	102	1.00	mg/L		99.7			1.98	20	
Matrix Spike (DA10755-MS1)	**Source: D1A1127-09**		Prepared: 01/14/2021 Analyzed: 01/15/2021							
Boron	0.607	0.0050	mg/L	0.500	0.119	97.5	70-130			
Copper	0.534	0.0020	mg/L	0.500	0.0152	104	70-130			
Sodium	87.1	1.00	mg/L	10.5	77.0	96.9	70-130			
Matrix Spike (DA10755-MS2)	**Source: L1A0151-01**		Prepared: 01/14/2021 Analyzed: 01/15/2021							
Boron	0.575	0.0050	mg/L	0.500	0.0876	97.5	70-130			
Copper	0.523	0.0020	mg/L	0.500	0.0039	104	70-130			
Sodium	129	1.00	mg/L	10.5	119	101	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10912 - 624.1 - EPA 624.1										
Blank (DA10912-BLK1)			Prepared & Analyzed: 01/14/2021							
Acrolein	<20.0	20.0	ug/L							
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*49.4*		ug/L	*50.0*		*98.8*	*70-130*			
Surrogate: Toluene-d8	*50.1*		ug/L	*50.0*		*100*	*70-130*			
Surrogate: Pentafluorobenzene	*39.7*		ug/L	*50.0*		*79.5*	*70-130*			
LCS (DA10912-BS1)			Prepared & Analyzed: 01/14/2021							
Acrolein	37.3	20.0	ug/L	50.0		74.5	60-140			
2-Chloroethyl vinyl ether	27.3	20.0	ug/L	50.0		54.7	1-305			
Surrogate: 1,2-Dichloroethane-d4	*45.9*		ug/L	*50.0*		*91.9*	*70-130*			
Surrogate: Toluene-d8	*48.5*		ug/L	*50.0*		*97.0*	*70-130*			
Surrogate: Pentafluorobenzene	*43.3*		ug/L	*50.0*		*86.5*	*70-130*			
Matrix Spike (DA10912-MS1)	**Source: D1A0994-07**		Prepared & Analyzed: 01/14/2021							
Acrolein	41.5	20.0	ug/L	50.0	ND	83.0	40-160			
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0	ND	25.5	1-305			
Surrogate: 1,2-Dichloroethane-d4	*50.7*		ug/L	*50.0*		*101*	*70-130*			
Surrogate: Toluene-d8	*51.0*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Pentafluorobenzene	*42.4*		ug/L	*50.0*		*84.9*	*70-130*			
Matrix Spike Dup (DA10912-MSD1)	**Source: D1A0994-07**		Prepared & Analyzed: 01/14/2021							
Acrolein	39.2	20.0	ug/L	50.0	ND	78.3	40-160	5.80	60	
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0	ND	25.7	1-305	0.625	71	
Surrogate: 1,2-Dichloroethane-d4	*49.6*		ug/L	*50.0*		*99.2*	*70-130*			
Surrogate: Toluene-d8	*51.4*		ug/L	*50.0*		*103*	*70-130*			
Surrogate: Pentafluorobenzene	*41.7*		ug/L	*50.0*		*83.4*	*70-130*			
Batch DA11088 - 624.1 - EPA 624.1										
Blank (DA11088-BLK1)			Prepared & Analyzed: 01/19/2021							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11088 - 624.1 - EPA 624.1										
Blank (DA11088-BLK1)			Prepared & Analyzed: 01/19/2021							
Acetone	<10.0	10.0	ug/L							
Acrylonitrile	<20.0	20.0	ug/L							
Benzene	<5.00	5.00	ug/L							
Bromodichloromethane	<5.00	5.00	ug/L							
Bromoform	<5.00	5.00	ug/L							
Bromomethane	<5.00	5.00	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Carbon disulfide	<5.00	5.00	ug/L							
Carbon tetrachloride	<5.00	5.00	ug/L							
Chlorobenzene	<5.00	5.00	ug/L							
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L							
Chloroform	<4.00	4.00	ug/L							
Chloromethane	<5.00	5.00	ug/L							
Dibromochloromethane	<5.00	5.00	ug/L							
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L							
1,2-Dichlorobenzene	<5.00	5.00	ug/L							
1,3-Dichlorobenzene	<5.00	5.00	ug/L							
1,4-Dichlorobenzene	<5.00	5.00	ug/L							
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L							
1,2-Dichloroethane	<5.00	5.00	ug/L							
1,1-Dichloroethane	<5.00	5.00	ug/L							
cis-1,2-Dichloroethene	<5.00	5.00	ug/L							
1,1-Dichloroethene	<5.00	5.00	ug/L							
trans-1,2-Dichloroethene	<4.00	4.00	ug/L							
1,2-Dichloropropane	<5.00	5.00	ug/L							
cis-1,3-Dichloropropene	<5.00	5.00	ug/L							
trans-1,3-Dichloropropene	<5.00	5.00	ug/L							
Ethylbenzene	<5.00	5.00	ug/L							
2-Hexanone (MBK)	<10.0	10.0	ug/L							
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L							
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L							
Styrene	<5.00	5.00	ug/L							
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L							
Tetrachloroethene	<5.00	5.00	ug/L							
Toluene	<5.00	5.00	ug/L							
1,1,2-Trichloroethane	<5.00	5.00	ug/L							
1,1,1-Trichloroethane	<5.00	5.00	ug/L							
Trichloroethene	<5.00	5.00	ug/L							
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L							
Vinyl chloride	<5.00	5.00	ug/L							
m,p-Xylene	<10.0	10.0	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11088 - 624.1 - EPA 624.1										
Blank (DA11088-BLK1)			Prepared & Analyzed: 01/19/2021							
o-Xylene	<5.00	5.00	ug/L							
Vinyl acetate	<5.00	5.00	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*50.9*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Toluene-d8	*51.8*		ug/L	*50.0*		*104*	*70-130*			
Matrix Spike (DA11088-MS1)	**Source: D1A0991-07**		Prepared & Analyzed: 01/19/2021							
Acetone	31.7	10.0	ug/L	50.0	ND	63.5	0-200			
Acrylonitrile	44.0	20.0	ug/L	50.0	ND	88.1	40-160			
Benzene	52.3	5.00	ug/L	50.0	ND	105	37-151			
Bromodichloromethane	51.5	5.00	ug/L	50.0	ND	103	35-155			
Bromoform	48.3	5.00	ug/L	50.0	ND	96.7	45-169			
Bromomethane	42.5	5.00	ug/L	50.0	ND	85.0	1-242			
2-Butanone (MEK)	38.6	10.0	ug/L	50.0	ND	77.2	0-200			
Carbon disulfide	48.7	5.00	ug/L	50.0	ND	97.3	0-200			
Carbon tetrachloride	55.4	5.00	ug/L	50.0	ND	111	70-140			
Chlorobenzene	50.3	5.00	ug/L	50.0	ND	101	37-160			
Chloroethane (Ethyl chloride)	33.6	5.00	ug/L	50.0	ND	67.1	14-230			
Chloroform	54.9	4.00	ug/L	50.0	ND	110	51-138			
Chloromethane	49.5	5.00	ug/L	50.0	ND	98.9	1-273			
Dibromochloromethane	49.5	5.00	ug/L	50.0	ND	99.1	53-149			
Dibromomethane (Methylene bromide)	51.5	5.00	ug/L	50.0	ND	103	0-200			
1,2-Dichlorobenzene	45.7	5.00	ug/L	50.0	ND	91.3	18-190			
1,3-Dichlorobenzene	45.9	5.00	ug/L	50.0	ND	91.9	59-156			
1,4-Dichlorobenzene	43.9	5.00	ug/L	50.0	ND	87.7	18-190			
Dichlorodifluoromethane (Freon-12)	46.3	5.00	ug/L	50.0	ND	92.6	0-200			
1,2-Dichloroethane	52.6	5.00	ug/L	50.0	ND	105	49-155			
1,1-Dichloroethane	50.5	5.00	ug/L	50.0	ND	101	59-155			
cis-1,2-Dichloroethene	49.8	5.00	ug/L	50.0	ND	99.5	0-200			
1,1-Dichloroethene	50.5	5.00	ug/L	50.0	ND	101	1-234			
trans-1,2-Dichloroethene	54.8	4.00	ug/L	50.0	ND	110	54-156			
1,2-Dichloropropane	50.2	5.00	ug/L	50.0	ND	100	1-210			
cis-1,3-Dichloropropene	49.3	5.00	ug/L	50.0	ND	98.6	1-227			
trans-1,3-Dichloropropene	46.7	5.00	ug/L	50.0	ND	93.4	17-183			
Ethylbenzene	49.7	5.00	ug/L	50.0	ND	99.3	37-162			
2-Hexanone (MBK)	39.1	10.0	ug/L	50.0	ND	78.2	0-200			
Methyl tert-butyl ether (MTBE)	45.5	5.00	ug/L	50.0	ND	91.0	0-200			
Methylene chloride (Dichloromethane)	52.0	1.00	ug/L	50.0	ND	104	1-221			
4-Methyl-2-pentanone (MIBK)	38.4	10.0	ug/L	50.0	ND	76.8	0-200			
Styrene	52.4	5.00	ug/L	50.0	ND	105	0-200			
1,1,2,2-Tetrachloroethane	56.9	5.00	ug/L	50.0	ND	114	46-157			
Tetrachloroethene	50.7	5.00	ug/L	50.0	ND	101	64-148			
Toluene	49.6	5.00	ug/L	50.0	ND	99.2	47-150			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11088 - 624.1 - EPA 624.1										
Matrix Spike (DA11088-MS1)	**Source: D1A0991-07**		Prepared & Analyzed: 01/19/2021							
1,1,2-Trichloroethane	47.4	5.00	ug/L	50.0	ND	94.7	52-150			
1,1,1-Trichloroethane	56.5	5.00	ug/L	50.0	ND	113	52-162			
Trichloroethene	50.9	5.00	ug/L	50.0	ND	102	70-157			
Trichlorofluoromethane (Freon 11)	40.6	5.00	ug/L	50.0	ND	81.2	17-181			
Vinyl chloride	49.7	5.00	ug/L	50.0	ND	99.5	1-251			
m,p-Xylene	106	10.0	ug/L	100	ND	106	0-200			
o-Xylene	50.4	5.00	ug/L	50.0	ND	101	0-200			
Vinyl acetate	58.9	5.00	ug/L	50.0	ND	118	60-140			
Surrogate: 1,2-Dichloroethane-d4	*49.1*		ug/L	*50.0*		*98.2*	*70-130*			
Surrogate: Toluene-d8	*49.1*		ug/L	*50.0*		*98.2*	*70-130*			
Surrogate: Pentafluorobenzene	*50.5*		ug/L	*50.0*		*101*	*70-130*			
Matrix Spike Dup (DA11088-MSD1)	**Source: D1A0991-07**		Prepared & Analyzed: 01/19/2021							
Acetone	33.1	10.0	ug/L	50.0	ND	66.2	0-200	4.19	200	
Acrylonitrile	42.1	20.0	ug/L	50.0	ND	84.2	40-160	4.46	60	
Benzene	51.1	5.00	ug/L	50.0	ND	102	37-151	2.32	61	
Bromodichloromethane	47.9	5.00	ug/L	50.0	ND	95.7	35-155	7.29	56	
Bromoform	48.0	5.00	ug/L	50.0	ND	96.0	45-169	0.664	42	
Bromomethane	43.4	5.00	ug/L	50.0	ND	86.7	1-242	2.00	61	
2-Butanone (MEK)	36.9	10.0	ug/L	50.0	ND	73.8	0-200	4.50	200	
Carbon disulfide	46.6	5.00	ug/L	50.0	ND	93.2	0-200	4.35	200	
Carbon tetrachloride	54.5	5.00	ug/L	50.0	ND	109	70-140	1.71	41	
Chlorobenzene	48.8	5.00	ug/L	50.0	ND	97.5	37-160	3.15	53	
Chloroethane (Ethyl chloride)	30.6	5.00	ug/L	50.0	ND	61.3	14-230	9.13	78	
Chloroform	53.0	4.00	ug/L	50.0	ND	106	51-138	3.62	54	
Chloromethane	49.3	5.00	ug/L	50.0	ND	98.5	1-273	0.405	60	
Dibromochloromethane	48.8	5.00	ug/L	50.0	ND	97.5	53-149	1.57	50	
Dibromomethane (Methylene bromide)	50.6	5.00	ug/L	50.0	ND	101	0-200	1.68	200	
1,2-Dichlorobenzene	43.4	5.00	ug/L	50.0	ND	86.8	18-190	5.03	57	
1,3-Dichlorobenzene	43.8	5.00	ug/L	50.0	ND	87.6	59-156	4.77	43	
1,4-Dichlorobenzene	42.6	5.00	ug/L	50.0	ND	85.2	18-190	2.96	57	
Dichlorodifluoromethane (Freon-12)	48.3	5.00	ug/L	50.0	ND	96.5	0-200	4.15	200	
1,2-Dichloroethane	52.4	5.00	ug/L	50.0	ND	105	49-155	0.381	49	
1,1-Dichloroethane	49.8	5.00	ug/L	50.0	ND	99.7	59-155	1.39	40	
cis-1,2-Dichloroethene	48.1	5.00	ug/L	50.0	ND	96.2	0-200	3.41	200	
1,1-Dichloroethene	49.1	5.00	ug/L	50.0	ND	98.2	1-234	2.81	32	
trans-1,2-Dichloroethene	54.1	4.00	ug/L	50.0	ND	108	54-156	1.12	45	
1,2-Dichloropropane	49.7	5.00	ug/L	50.0	ND	99.4	1-210	1.02	55	
cis-1,3-Dichloropropene	48.9	5.00	ug/L	50.0	ND	97.8	1-227	0.753	58	
trans-1,3-Dichloropropene	45.5	5.00	ug/L	50.0	ND	91.0	17-183	2.67	86	
Ethylbenzene	48.0	5.00	ug/L	50.0	ND	96.0	37-162	3.42	63	
2-Hexanone (MBK)	38.3	10.0	ug/L	50.0	ND	76.6	0-200	2.09	200	
Methyl tert-butyl ether (MTBE)	44.2	5.00	ug/L	50.0	ND	88.4	0-200	2.94	200	

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11088 - 624.1 - EPA 624.1										
Matrix Spike Dup (DA11088-MSD1)	**Source: D1A0991-07**		Prepared & Analyzed: 01/19/2021							
Methylene chloride (Dichloromethane)	50.1	1.00	ug/L	50.0	ND	100	1-221	3.70	28	
4-Methyl-2-pentanone (MIBK)	38.4	10.0	ug/L	50.0	ND	76.7	0-200	0.130	200	
Styrene	51.2	5.00	ug/L	50.0	ND	102	0-200	2.28	200	
1,1,2,2-Tetrachloroethane	53.0	5.00	ug/L	50.0	ND	106	46-157	6.97	61	
Tetrachloroethene	48.5	5.00	ug/L	50.0	ND	97.0	64-148	4.48	39	
Toluene	47.3	5.00	ug/L	50.0	ND	94.6	47-150	4.71	41	
1,1,2-Trichloroethane	46.3	5.00	ug/L	50.0	ND	92.5	52-150	2.35	45	
1,1,1-Trichloroethane	55.2	5.00	ug/L	50.0	ND	110	52-162	2.29	36	
Trichloroethene	49.8	5.00	ug/L	50.0	ND	99.6	70-157	2.18	48	
Trichlorofluoromethane (Freon 11)	39.6	5.00	ug/L	50.0	ND	79.2	17-181	2.49	84	
Vinyl chloride	48.6	5.00	ug/L	50.0	ND	97.1	1-251	2.40	66	
m,p-Xylene	102	10.0	ug/L	100	ND	102	0-200	3.51	200	
o-Xylene	49.2	5.00	ug/L	50.0	ND	98.3	0-200	2.49	200	
Vinyl acetate	57.5	5.00	ug/L	50.0	ND	115	60-140	2.37	25	
Surrogate: 1,2-Dichloroethane-d4	*48.3*		ug/L	*50.0*		*96.7*	*70-130*			
Surrogate: Toluene-d8	*48.2*		ug/L	*50.0*		*96.4*	*70-130*			
Surrogate: Pentafluorobenzene	*51.3*		ug/L	*50.0*		*103*	*70-130*			

Definitions

mg CaCO3/L	Milligrams Calcium Carbonate per Liter
mg/L:	Milligrams per Liter
R3:	Duplicate RPD is outside of acceptance criteria. The difference between the results is less than 2x Method Reporting Limit.
RL:	Reporting Limit
RPD:	Relative Percent Difference
ug/L:	Micrograms per Liter
Y1:	Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.3°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008 Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:

Melisa L. Montgomery

Quality Assurance Officer

Reported: 01/21/2021 13:38

MICROBAC

CHAI

61 Louisa V
Tel: (860)7

D 1 A 0 9 9 1
W & C - Plymouth

FOR LAB USE ONLY

Lab WO#

Project Manager Kam

Microbac Laboratories, Inc.

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
DELIVERY: ROBERT BLANCHARD
E-MAIL: [illegible]
PHONE: 508-830-4159 FAX: 508-732-0238

BILL TO: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
PURCHASE ORDER #
ATTENTION: ACCOUNTS PAYABLE
PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP
LOCATION: ID 11773
WELLS - QUARTERLY
ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL
ROBERT SCOTT
PHONE: CELL - 860-204-7988
FAX: 508-732-0238

Sample Identification		Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # A8 (250 mL)		1/12/2021	10:54		X	WW	1	X	X											X			
Well # A8 (250 mL)		1/12/2021	10:54		X	WW	1			X	X								X				
Well # A8 (250 mL)(filtered)		1/12/2021	10:54		X	WW	1					X							X				
Well # A8 (250 mL)		1/12/2021	10:54		X	WW	1						X						X				
Well # A8 (250 mL)		1/12/2021	10:54		X	WW	1							X					X				
Well # A8 (250 mL)		1/12/2021	10:54		X	WW	1								X	X	X					X	
Well # A8 (40 mL vial)	A8	1/12/2021	10:54		X	WW	2											X	X				
Well # BA8 (40 mL vial)	A8	1/12/2021	10:54		X	WW	2			PRESERVATIVE VERIFIED Initials								X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER: Steven Walker	1/12/21	
RECEIVED:		
RELINQUISHED: Steven Walker	1/12/21	13:11
CEIVED: Ryan Ellison	1.12.2021	1311
ELINQUISHED: Ryan Ellison	1.12.2021	1605
CEIVED:	1-12-21	1605

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE):

COOLED ☐ AMBIENT ☐ COMPLIANT ☐ 3.3°C

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A0992

Project Description

Wells - Quarterly

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Thursday, January 21, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A0992

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Quarterly

Project / PO Number: 346346
Received: 01/12/2021
Reported: 01/21/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well A9	D1A0992-01	Groundwater	Grab		01/12/21 08:47	01/12/21 16:05
Well A9	D1A0992-02	Groundwater	Grab		01/12/21 08:47	01/12/21 16:05
Well A9 (filtered)	D1A0992-03	Groundwater	Grab		01/12/21 08:47	01/12/21 16:05
Well A9	D1A0992-04	Groundwater	Grab		01/12/21 08:47	01/12/21 16:05
Well A9	D1A0992-05	Groundwater	Grab		01/12/21 08:47	01/12/21 16:05
Well A9	D1A0992-06	Groundwater	Grab		01/12/21 08:47	01/12/21 16:05
Well A9	D1A0992-07	Groundwater	Grab		01/12/21 08:47	01/12/21 16:05

Analytical Testing Parameters

Client Sample ID: Well A9
Sample Matrix: Groundwater
Lab Sample ID: D1A0992-01
Collected By: Customer
Collection Date: 01/12/2021 8:47

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 351.1					**Method Notes:** D1			
Total Kjeldahl Nitrogen (TKN)	<0.800	0.800	mg/L	1		01/15/21 0932	01/15/21 1528	CLW
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0351**	0.0106	mg/L	1		01/13/21 1800	01/14/21 1029	CLW

Client Sample ID: Well A9
Sample Matrix: Groundwater
Lab Sample ID: D1A0992-02
Collected By: Customer
Collection Date: 01/12/2021 8:47

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-NO_3^- F-2011								
Nitrate as N	**4.59**	0.0500	mg/L	1			01/12/21 1929	DJM
Nitrite as N	**0.0163**	0.0100	mg/L	1	**Y1**		01/12/21 1929	DJM

Client Sample ID: Well A9 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1A0992-03
Collected By: Customer
Collection Date: 01/12/2021 8:47

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0620**	0.0100	mg/L	1		01/12/21 1745	01/12/21 1906	DJM

Client Sample ID: Well A9
Sample Matrix: Groundwater
Lab Sample ID: D1A0992-04
Collected By: Customer
Collection Date: 01/12/2021 8:47

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 2320 B-2011								
Alkalinity to pH 4.5	**37.5**	1.00	mg CaCO3/L	1			01/15/21 1635	MAD

Client Sample ID:	Well A9		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A0992-05	**Collection Date:**	01/12/2021 8:47

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-Cl E-2011								
Chloride	**495**	20.0	mg/L	10			01/18/21 1627	CLW

Client Sample ID:	Well A9		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A0992-06	**Collection Date:**	01/12/2021 8:47

Metals Total by ICP	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.7, Rv. 4.4 (1994)								
Boron	**0.147**	0.0050	mg/L	1	**Y1**	01/14/21 1433	01/15/21 1245	JDF
Copper	**0.0040**	0.0020	mg/L	1		01/14/21 1433	01/15/21 1245	JDF
Sodium	**345**	1.00	mg/L	1		01/14/21 1433	01/15/21 1245	JDF

CERTIFICATE OF ANALYSIS

D1A0992

Client Sample ID:	Well A9		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A0992-07	**Collection Date:**	01/12/2021 8:47

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acetone	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1639	JAN
Acrolein	<20.0	20.0	ug/L	1			01/14/21 1414	JAN
Acrylonitrile	<20.0	20.0	ug/L	1			01/19/21 1639	JAN
Benzene	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
Bromodichloromethane	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
Bromoform	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
Bromomethane	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
2-Butanone (MEK)	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1639	JAN
Carbon disulfide	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1639	JAN
Carbon tetrachloride	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
Chlorobenzene	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	1			01/14/21 1414	JAN
Chloroform	**8.92**	4.00	ug/L	1			01/19/21 1639	JAN
Chloromethane	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
Dibromochloromethane	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1639	JAN
1,2-Dichlorobenzene	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
1,3-Dichlorobenzene	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
1,4-Dichlorobenzene	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1639	JAN
1,2-Dichloroethane	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
1,1-Dichloroethane	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
cis-1,2-Dichloroethene	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1639	JAN
1,1-Dichloroethene	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
trans-1,2-Dichloroethene	<4.00	4.00	ug/L	1			01/19/21 1639	JAN
1,2-Dichloropropane	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
cis-1,3-Dichloropropene	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
trans-1,3-Dichloropropene	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
Ethylbenzene	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
2-Hexanone (MBK)	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1639	JAN
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1639	JAN
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L	1			01/19/21 1639	JAN
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1639	JAN
Styrene	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1639	JAN
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
Tetrachloroethene	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
Toluene	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
1,1,2-Trichloroethane	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
1,1,1-Trichloroethane	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
Trichloroethene	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L	1			01/19/21 1639	JAN

CERTIFICATE OF ANALYSIS

D1A0992

Client Sample ID:	Well A9		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A0992-07	**Collection Date:**	01/12/2021 8:47

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Vinyl chloride	<5.00	5.00	ug/L	1			01/19/21 1639	JAN
m,p-Xylene	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1639	JAN
o-Xylene	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1639	JAN
Vinyl acetate	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1639	JAN
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 70-130	% Rec	1			01/19/21 1639	JAN
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 70-130	% Rec	1			01/14/21 1414	JAN
Surrogate: Toluene-d8	101	Limit: 70-130	% Rec	1			01/14/21 1414	JAN
Surrogate: Toluene-d8	103	Limit: 70-130	% Rec	1			01/19/21 1639	JAN
Surrogate: Pentafluorobenzene	86.8	Limit: 70-130	% Rec	1			01/14/21 1414	JAN

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-$NO3^-$ F-2011	DA10585	DA10585-DUP1	D1A0933-01
		DA10585-DUP1	D1A0933-01
		DA10585-MS1	D1A0933-01
		DA10585-MS1	D1A0933-01
		DA10585-MSD1	D1A0933-01
		DA10585-MSD1	D1A0933-01
		DA10585-BS1	
		DA10585-BS2	
		DA10585-BLK1	
		DA10585-BLK1	
		D1A0992-02	Well A9
		D1A0992-02	Well A9

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DA10618	DA10618-BLK1	
		DA10618-BS1	
		DA10618-MS2	D1A0858-05
		D1A0992-03	Well A9 (filtered)
		DA10618-DUP1	D1A0858-04
		DA10618-MS1	D1A0858-04

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DA10683	DA10683-BS1	
		DA10683-BLK1	
		D1A0992-01	Well A9
		DA10683-DUP1	D1A0991-01
		DA10683-MS2	L1A0117-01
		DA10683-MS1	D1A0991-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.7, Rv. 4.4 (1994)	DA10755	DA10755-BLK1	
		DA10755-BS1	
		DA10755-DUP1	D1A0991-06
		DA10755-MS1	D1A1127-09
		D1A0992-06	Well A9
		D1A0992-06	Well A9
		DA10755-MS2	L1A0151-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 351.1	DA10811	DA10811-BS1	
		DA10811-MS1	D1A0991-01

EPA 351.1	DA10811	DA10811-MS2	D1A0994-01
		DA10811-DUP1	D1A0991-01
		D1A0992-01	Well A9
		DA10811-BLK1	

Method	Batch	Laboratory ID	Client / Source ID
SM 2320 B-2011	DA10868	D1A0992-04	Well A9
		DA10868-BS1	
		DA10868-DUP1	D1A0979-08
		DA10868-BLK1	

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-Cl E-2011	DA10893	DA10893-BS1	
		DA10893-BLK1	
		DA10893-DUP1	D1A1288-05
		DA10893-MSD1	D1A1288-05
		DA10893-MS1	D1A1288-05
		D1A0992-05	Well A9

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DA10912	DA10912-BS1	
		DA10912-BLK1	
		D1A0992-07	Well A9
		DA10912-MS1	D1A0994-07
		DA10912-MSD1	D1A0994-07

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DA11088	DA11088-BLK1	
		D1A0992-07	Well A9
		DA11088-MS1	D1A0991-07
		DA11088-MSD1	D1A0991-07

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10585 - Wet Chem - W - SM 4500-NO_3^- F-2011										
Blank (DA10585-BLK1)			Prepared & Analyzed: 01/12/2021							
Nitrite as N	<0.0100	0.0100	mg/L							
Nitrate as N	<0.0500	0.0500	mg/L							
LCS (DA10585-BS1)			Prepared & Analyzed: 01/12/2021							
Nitrate as N	5.24	0.0500	mg/L	5.00		105	90-110			
LCS (DA10585-BS2)			Prepared & Analyzed: 01/12/2021							
Nitrite as N	0.972	0.0100	mg/L	1.00		97.2	90-110			
Duplicate (DA10585-DUP1)		**Source: D1A0933-01**	Prepared & Analyzed: 01/12/2021							

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10585 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Duplicate (DA10585-DUP1)		**Source: D1A0933-01**	Prepared & Analyzed: 01/12/2021							
Nitrite as N	<0.0100	0.0100	mg/L		ND				20	R3
Nitrate as N	<0.0500	0.0500	mg/L		ND				20	
Matrix Spike (DA10585-MS1)		**Source: D1A0933-01**	Prepared & Analyzed: 01/12/2021							
Nitrite as N	0.989	0.0100	mg/L	1.00	ND	98.9	75-125			
Nitrate as N	4.98	0.0500	mg/L	5.00	ND	99.5	75-125			
Matrix Spike Dup (DA10585-MSD1)		**Source: D1A0933-01**	Prepared & Analyzed: 01/12/2021							
Nitrite as N	0.977	0.0100	mg/L	1.00	ND	97.7	75-125	1.29	20	
Nitrate as N	4.94	0.0500	mg/L	5.00	ND	98.7	75-125	0.825	20	
Batch DA10618 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10618-BLK1)			Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DA10618-BS1)			Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	0.988	0.0100	mg/L	1.00		98.7	90-110			
Duplicate (DA10618-DUP1)		**Source: D1A0858-04**	Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	4.00	0.0400	mg/L		4.00			0.125	20	
Matrix Spike (DA10618-MS1)		**Source: D1A0858-04**	Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	4.98	0.0400	mg/L	1.00	4.00	98.3	90-110			
Matrix Spike (DA10618-MS2)		**Source: D1A0858-05**	Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	1.24	0.0100	mg/L	1.00	0.286	94.8	90-110			
Batch DA10683 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10683-BLK1)			Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DA10683-BS1)			Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	0.983	0.0106	mg/L	1.00		98.3	90-110			
Duplicate (DA10683-DUP1)		**Source: D1A0991-01**	Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	2.73	0.0213	mg/L		2.79			1.92	20	
Matrix Spike (DA10683-MS1)		**Source: D1A0991-01**	Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	4.06	0.0425	mg/L	1.25	2.79	102	90-110			
Matrix Spike (DA10683-MS2)		**Source: L1A0117-01**	Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	2.58	0.0213	mg/L	1.25	1.36	97.4	90-110			
Batch DA10811 - Wet-Digestion-W - EPA 351.1										
Blank (DA10811-BLK1)			Prepared & Analyzed: 01/15/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L							
LCS (DA10811-BS1)			Prepared & Analyzed: 01/15/2021							
Total Kjeldahl Nitrogen (TKN)	5.01	0.200	mg/L	5.00		100	90-110			
Duplicate (DA10811-DUP1)		**Source: D1A0991-01**	Prepared & Analyzed: 01/15/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L		ND				20	

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10811 - Wet-Digestion-W - EPA 351.1										
Matrix Spike (DA10811-MS1)		**Source: D1A0991-01**		Prepared & Analyzed: 01/15/2021						
Total Kjeldahl Nitrogen (TKN)	10.1	0.200	mg/L	10.0	ND	101	90-110			
Matrix Spike (DA10811-MS2)		**Source: D1A0994-01**		Prepared & Analyzed: 01/15/2021						
Total Kjeldahl Nitrogen (TKN)	10.2	0.200	mg/L	10.0	ND	102	90-110			
Batch DA10868 - Wet Chem - W - SM 2320 B-2011										
Blank (DA10868-BLK1)				Prepared & Analyzed: 01/15/2021						
Alkalinity to pH 4.5	<1.00	1.00	mg CaCO3/ L							
LCS (DA10868-BS1)				Prepared & Analyzed: 01/15/2021						
Alkalinity to pH 4.5	50.0	1.00	mg CaCO3/ L	50.0		100	90-110			
Duplicate (DA10868-DUP1)		**Source: D1A0979-08**		Prepared & Analyzed: 01/15/2021						
Alkalinity to pH 4.5	47.5	1.00	mg CaCO3/ L		47.5			0.00	20	
Batch DA10893 - Wet Chem - W - SM 4500-Cl E-2011										
Blank (DA10893-BLK1)				Prepared & Analyzed: 01/18/2021						
Chloride	<2.00	2.00	mg/L							
LCS (DA10893-BS1)				Prepared & Analyzed: 01/18/2021						
Chloride	19.5	2.00	mg/L	20.0		97.4	90-110			
Duplicate (DA10893-DUP1)		**Source: D1A1288-05**		Prepared & Analyzed: 01/18/2021						
Chloride	13.8	2.00	mg/L		13.8			0.0153	20	
Matrix Spike (DA10893-MS1)		**Source: D1A1288-05**		Prepared & Analyzed: 01/18/2021						
Chloride	34.2	2.00	mg/L	20.0	13.8	102	75-125			
Matrix Spike Dup (DA10893-MSD1)		**Source: D1A1288-05**		Prepared & Analyzed: 01/18/2021						
Chloride	34.6	2.00	mg/L	20.0	13.8	104	75-125	0.964	20	

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10755 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DA10755-BLK1)				Prepared: 01/14/2021 Analyzed: 01/15/2021						
Boron	<0.0050	0.0050	mg/L							
Copper	<0.0020	0.0020	mg/L							
Sodium	<1.00	1.00	mg/L							
LCS (DA10755-BS1)				Prepared: 01/14/2021 Analyzed: 01/15/2021						
Boron	0.495	0.0050	mg/L	0.500		99.0	85-115			
Copper	0.519	0.0020	mg/L	0.500		104	85-115			
Sodium	10.4	1.00	mg/L	10.5		98.8	85-115			
Duplicate (DA10755-DUP1)		**Source: D1A0991-06**		Prepared: 01/14/2021 Analyzed: 01/15/2021						

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10755 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Duplicate (DA10755-DUP1)	**Source: D1A0991-06**		Prepared: 01/14/2021 Analyzed: 01/15/2021							
Boron	0.0634	0.0050	mg/L		0.0638			0.605	20	
Copper	<0.0020	0.0020	mg/L		0.0020			200	20	R3
Sodium	102	1.00	mg/L		99.7			1.98	20	
Matrix Spike (DA10755-MS1)	**Source: D1A1127-09**		Prepared: 01/14/2021 Analyzed: 01/15/2021							
Boron	0.607	0.0050	mg/L	0.500	0.119	97.5	70-130			
Copper	0.534	0.0020	mg/L	0.500	0.0152	104	70-130			
Sodium	87.1	1.00	mg/L	10.5	77.0	96.9	70-130			
Matrix Spike (DA10755-MS2)	**Source: L1A0151-01**		Prepared: 01/14/2021 Analyzed: 01/15/2021							
Boron	0.575	0.0050	mg/L	0.500	0.0876	97.5	70-130			
Copper	0.523	0.0020	mg/L	0.500	0.0039	104	70-130			
Sodium	129	1.00	mg/L	10.5	119	101	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10912 - 624.1 - EPA 624.1										
Blank (DA10912-BLK1)			Prepared & Analyzed: 01/14/2021							
Acrolein	<20.0	20.0	ug/L							
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*49.4*		ug/L	*50.0*		*98.8*	*70-130*			
Surrogate: Toluene-d8	*50.1*		ug/L	*50.0*		*100*	*70-130*			
Surrogate: Pentafluorobenzene	*39.7*		ug/L	*50.0*		*79.5*	*70-130*			
LCS (DA10912-BS1)			Prepared & Analyzed: 01/14/2021							
Acrolein	37.3	20.0	ug/L	50.0		74.5	60-140			
2-Chloroethyl vinyl ether	27.3	20.0	ug/L	50.0		54.7	1-305			
Surrogate: 1,2-Dichloroethane-d4	*45.9*		ug/L	*50.0*		*91.9*	*70-130*			
Surrogate: Toluene-d8	*48.5*		ug/L	*50.0*		*97.0*	*70-130*			
Surrogate: Pentafluorobenzene	*43.3*		ug/L	*50.0*		*86.5*	*70-130*			
Matrix Spike (DA10912-MS1)	**Source: D1A0994-07**		Prepared & Analyzed: 01/14/2021							
Acrolein	41.5	20.0	ug/L	50.0	ND	83.0	40-160			
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0	ND	25.5	1-305			
Surrogate: 1,2-Dichloroethane-d4	*50.7*		ug/L	*50.0*		*101*	*70-130*			
Surrogate: Toluene-d8	*51.0*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Pentafluorobenzene	*42.4*		ug/L	*50.0*		*84.9*	*70-130*			
Matrix Spike Dup (DA10912-MSD1)	**Source: D1A0994-07**		Prepared & Analyzed: 01/14/2021							
Acrolein	39.2	20.0	ug/L	50.0	ND	78.3	40-160	5.80	60	
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0	ND	25.7	1-305	0.625	71	
Surrogate: 1,2-Dichloroethane-d4	*49.6*		ug/L	*50.0*		*99.2*	*70-130*			
Surrogate: Toluene-d8	*51.4*		ug/L	*50.0*		*103*	*70-130*			
Surrogate: Pentafluorobenzene	*41.7*		ug/L	*50.0*		*83.4*	*70-130*			
Batch DA11088 - 624.1 - EPA 624.1										
Blank (DA11088-BLK1)			Prepared & Analyzed: 01/19/2021							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11088 - 624.1 - EPA 624.1										
Blank (DA11088-BLK1)			Prepared & Analyzed: 01/19/2021							
Acetone	<10.0	10.0	ug/L							
Acrylonitrile	<20.0	20.0	ug/L							
Benzene	<5.00	5.00	ug/L							
Bromodichloromethane	<5.00	5.00	ug/L							
Bromoform	<5.00	5.00	ug/L							
Bromomethane	<5.00	5.00	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Carbon disulfide	<5.00	5.00	ug/L							
Carbon tetrachloride	<5.00	5.00	ug/L							
Chlorobenzene	<5.00	5.00	ug/L							
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L							
Chloroform	<4.00	4.00	ug/L							
Chloromethane	<5.00	5.00	ug/L							
Dibromochloromethane	<5.00	5.00	ug/L							
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L							
1,2-Dichlorobenzene	<5.00	5.00	ug/L							
1,3-Dichlorobenzene	<5.00	5.00	ug/L							
1,4-Dichlorobenzene	<5.00	5.00	ug/L							
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L							
1,2-Dichloroethane	<5.00	5.00	ug/L							
1,1-Dichloroethane	<5.00	5.00	ug/L							
cis-1,2-Dichloroethene	<5.00	5.00	ug/L							
1,1-Dichloroethene	<5.00	5.00	ug/L							
trans-1,2-Dichloroethene	<4.00	4.00	ug/L							
1,2-Dichloropropane	<5.00	5.00	ug/L							
cis-1,3-Dichloropropene	<5.00	5.00	ug/L							
trans-1,3-Dichloropropene	<5.00	5.00	ug/L							
Ethylbenzene	<5.00	5.00	ug/L							
2-Hexanone (MBK)	<10.0	10.0	ug/L							
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L							
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L							
Styrene	<5.00	5.00	ug/L							
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L							
Tetrachloroethene	<5.00	5.00	ug/L							
Toluene	<5.00	5.00	ug/L							
1,1,2-Trichloroethane	<5.00	5.00	ug/L							
1,1,1-Trichloroethane	<5.00	5.00	ug/L							
Trichloroethene	<5.00	5.00	ug/L							
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L							
Vinyl chloride	<5.00	5.00	ug/L							
m,p-Xylene	<10.0	10.0	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11088 - 624.1 - EPA 624.1										
Blank (DA11088-BLK1)			Prepared & Analyzed: 01/19/2021							
o-Xylene	<5.00	5.00	ug/L							
Vinyl acetate	<5.00	5.00	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*50.9*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Toluene-d8	*51.8*		ug/L	*50.0*		*104*	*70-130*			
Matrix Spike (DA11088-MS1)	**Source: D1A0991-07**		Prepared & Analyzed: 01/19/2021							
Acetone	31.7	10.0	ug/L	50.0	ND	63.5	0-200			
Acrylonitrile	44.0	20.0	ug/L	50.0	ND	88.1	40-160			
Benzene	52.3	5.00	ug/L	50.0	ND	105	37-151			
Bromodichloromethane	51.5	5.00	ug/L	50.0	ND	103	35-155			
Bromoform	48.3	5.00	ug/L	50.0	ND	96.7	45-169			
Bromomethane	42.5	5.00	ug/L	50.0	ND	85.0	1-242			
2-Butanone (MEK)	38.6	10.0	ug/L	50.0	ND	77.2	0-200			
Carbon disulfide	48.7	5.00	ug/L	50.0	ND	97.3	0-200			
Carbon tetrachloride	55.4	5.00	ug/L	50.0	ND	111	70-140			
Chlorobenzene	50.3	5.00	ug/L	50.0	ND	101	37-160			
Chloroethane (Ethyl chloride)	33.6	5.00	ug/L	50.0	ND	67.1	14-230			
Chloroform	54.9	4.00	ug/L	50.0	ND	110	51-138			
Chloromethane	49.5	5.00	ug/L	50.0	ND	98.9	1-273			
Dibromochloromethane	49.5	5.00	ug/L	50.0	ND	99.1	53-149			
Dibromomethane (Methylene bromide)	51.5	5.00	ug/L	50.0	ND	103	0-200			
1,2-Dichlorobenzene	45.7	5.00	ug/L	50.0	ND	91.3	18-190			
1,3-Dichlorobenzene	45.9	5.00	ug/L	50.0	ND	91.9	59-156			
1,4-Dichlorobenzene	43.9	5.00	ug/L	50.0	ND	87.7	18-190			
Dichlorodifluoromethane (Freon-12)	46.3	5.00	ug/L	50.0	ND	92.6	0-200			
1,2-Dichloroethane	52.6	5.00	ug/L	50.0	ND	105	49-155			
1,1-Dichloroethane	50.5	5.00	ug/L	50.0	ND	101	59-155			
cis-1,2-Dichloroethene	49.8	5.00	ug/L	50.0	ND	99.5	0-200			
1,1-Dichloroethene	50.5	5.00	ug/L	50.0	ND	101	1-234			
trans-1,2-Dichloroethene	54.8	4.00	ug/L	50.0	ND	110	54-156			
1,2-Dichloropropane	50.2	5.00	ug/L	50.0	ND	100	1-210			
cis-1,3-Dichloropropene	49.3	5.00	ug/L	50.0	ND	98.6	1-227			
trans-1,3-Dichloropropene	46.7	5.00	ug/L	50.0	ND	93.4	17-183			
Ethylbenzene	49.7	5.00	ug/L	50.0	ND	99.3	37-162			
2-Hexanone (MBK)	39.1	10.0	ug/L	50.0	ND	78.2	0-200			
Methyl tert-butyl ether (MTBE)	45.5	5.00	ug/L	50.0	ND	91.0	0-200			
Methylene chloride (Dichloromethane)	52.0	1.00	ug/L	50.0	ND	104	1-221			
4-Methyl-2-pentanone (MIBK)	38.4	10.0	ug/L	50.0	ND	76.8	0-200			
Styrene	52.4	5.00	ug/L	50.0	ND	105	0-200			
1,1,2,2-Tetrachloroethane	56.9	5.00	ug/L	50.0	ND	114	46-157			
Tetrachloroethene	50.7	5.00	ug/L	50.0	ND	101	64-148			
Toluene	49.6	5.00	ug/L	50.0	ND	99.2	47-150			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11088 - 624.1 - EPA 624.1										
Matrix Spike (DA11088-MS1)	**Source: D1A0991-07**		Prepared & Analyzed: 01/19/2021							
1,1,2-Trichloroethane	47.4	5.00	ug/L	50.0	ND	94.7	52-150			
1,1,1-Trichloroethane	56.5	5.00	ug/L	50.0	ND	113	52-162			
Trichloroethene	50.9	5.00	ug/L	50.0	ND	102	70-157			
Trichlorofluoromethane (Freon 11)	40.6	5.00	ug/L	50.0	ND	81.2	17-181			
Vinyl chloride	49.7	5.00	ug/L	50.0	ND	99.5	1-251			
m,p-Xylene	106	10.0	ug/L	100	ND	106	0-200			
o-Xylene	50.4	5.00	ug/L	50.0	ND	101	0-200			
Vinyl acetate	58.9	5.00	ug/L	50.0	ND	118	60-140			
Surrogate: 1,2-Dichloroethane-d4	*49.1*		ug/L	*50.0*		*98.2*	*70-130*			
Surrogate: Toluene-d8	*49.1*		ug/L	*50.0*		*98.2*	*70-130*			
Surrogate: Pentafluorobenzene	*50.5*		ug/L	*50.0*		*101*	*70-130*			
Matrix Spike Dup (DA11088-MSD1)	**Source: D1A0991-07**		Prepared & Analyzed: 01/19/2021							
Acetone	33.1	10.0	ug/L	50.0	ND	66.2	0-200	4.19	200	
Acrylonitrile	42.1	20.0	ug/L	50.0	ND	84.2	40-160	4.46	60	
Benzene	51.1	5.00	ug/L	50.0	ND	102	37-151	2.32	61	
Bromodichloromethane	47.9	5.00	ug/L	50.0	ND	95.7	35-155	7.29	56	
Bromoform	48.0	5.00	ug/L	50.0	ND	96.0	45-169	0.664	42	
Bromomethane	43.4	5.00	ug/L	50.0	ND	86.7	1-242	2.00	61	
2-Butanone (MEK)	36.9	10.0	ug/L	50.0	ND	73.8	0-200	4.50	200	
Carbon disulfide	46.6	5.00	ug/L	50.0	ND	93.2	0-200	4.35	200	
Carbon tetrachloride	54.5	5.00	ug/L	50.0	ND	109	70-140	1.71	41	
Chlorobenzene	48.8	5.00	ug/L	50.0	ND	97.5	37-160	3.15	53	
Chloroethane (Ethyl chloride)	30.6	5.00	ug/L	50.0	ND	61.3	14-230	9.13	78	
Chloroform	53.0	4.00	ug/L	50.0	ND	106	51-138	3.62	54	
Chloromethane	49.3	5.00	ug/L	50.0	ND	98.5	1-273	0.405	60	
Dibromochloromethane	48.8	5.00	ug/L	50.0	ND	97.5	53-149	1.57	50	
Dibromomethane (Methylene bromide)	50.6	5.00	ug/L	50.0	ND	101	0-200	1.68	200	
1,2-Dichlorobenzene	43.4	5.00	ug/L	50.0	ND	86.8	18-190	5.03	57	
1,3-Dichlorobenzene	43.8	5.00	ug/L	50.0	ND	87.6	59-156	4.77	43	
1,4-Dichlorobenzene	42.6	5.00	ug/L	50.0	ND	85.2	18-190	2.96	57	
Dichlorodifluoromethane (Freon-12)	48.3	5.00	ug/L	50.0	ND	96.5	0-200	4.15	200	
1,2-Dichloroethane	52.4	5.00	ug/L	50.0	ND	105	49-155	0.381	49	
1,1-Dichloroethane	49.8	5.00	ug/L	50.0	ND	99.7	59-155	1.39	40	
cis-1,2-Dichloroethene	48.1	5.00	ug/L	50.0	ND	96.2	0-200	3.41	200	
1,1-Dichloroethene	49.1	5.00	ug/L	50.0	ND	98.2	1-234	2.81	32	
trans-1,2-Dichloroethene	54.1	4.00	ug/L	50.0	ND	108	54-156	1.12	45	
1,2-Dichloropropane	49.7	5.00	ug/L	50.0	ND	99.4	1-210	1.02	55	
cis-1,3-Dichloropropene	48.9	5.00	ug/L	50.0	ND	97.8	1-227	0.753	58	
trans-1,3-Dichloropropene	45.5	5.00	ug/L	50.0	ND	91.0	17-183	2.67	86	
Ethylbenzene	48.0	5.00	ug/L	50.0	ND	96.0	37-162	3.42	63	
2-Hexanone (MBK)	38.3	10.0	ug/L	50.0	ND	76.6	0-200	2.09	200	
Methyl tert-butyl ether (MTBE)	44.2	5.00	ug/L	50.0	ND	88.4	0-200	2.94	200	

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11088 - 624.1 - EPA 624.1										
Matrix Spike Dup (DA11088-MSD1)	**Source: D1A0991-07**		Prepared & Analyzed: 01/19/2021							
Methylene chloride (Dichloromethane)	50.1	1.00	ug/L	50.0	ND	100	1-221	3.70	28	
4-Methyl-2-pentanone (MIBK)	38.4	10.0	ug/L	50.0	ND	76.7	0-200	0.130	200	
Styrene	51.2	5.00	ug/L	50.0	ND	102	0-200	2.28	200	
1,1,2,2-Tetrachloroethane	53.0	5.00	ug/L	50.0	ND	106	46-157	6.97	61	
Tetrachloroethene	48.5	5.00	ug/L	50.0	ND	97.0	64-148	4.48	39	
Toluene	47.3	5.00	ug/L	50.0	ND	94.6	47-150	4.71	41	
1,1,2-Trichloroethane	46.3	5.00	ug/L	50.0	ND	92.5	52-150	2.35	45	
1,1,1-Trichloroethane	55.2	5.00	ug/L	50.0	ND	110	52-162	2.29	36	
Trichloroethene	49.8	5.00	ug/L	50.0	ND	99.6	70-157	2.18	48	
Trichlorofluoromethane (Freon 11)	39.6	5.00	ug/L	50.0	ND	79.2	17-181	2.49	84	
Vinyl chloride	48.6	5.00	ug/L	50.0	ND	97.1	1-251	2.40	66	
m,p-Xylene	102	10.0	ug/L	100	ND	102	0-200	3.51	200	
o-Xylene	49.2	5.00	ug/L	50.0	ND	98.3	0-200	2.49	200	
Vinyl acetate	57.5	5.00	ug/L	50.0	ND	115	60-140	2.37	25	
Surrogate: 1,2-Dichloroethane-d4	*48.3*		ug/L	*50.0*		*96.7*	*70-130*			
Surrogate: Toluene-d8	*48.2*		ug/L	*50.0*		*96.4*	*70-130*			
Surrogate: Pentafluorobenzene	*51.3*		ug/L	*50.0*		*103*	*70-130*			

Definitions

D1:	The sample was diluted during sample preparation (extraction, distillation or digestion) due to matrix interference.
mg CaCO3/L	Milligrams Calcium Carbonate per Liter
mg/L:	Milligrams per Liter
R3:	Duplicate RPD is outside of acceptance criteria. The difference between the results is less than 2x Method Reporting Limit.
RL:	Reporting Limit
RPD:	Relative Percent Difference
ug/L:	Micrograms per Liter
Y1:	Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.3°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008 Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:

Melisa L. Montgomery

Quality Assurance Officer

Reported: 01/21/2021 13:32

MICROBAC

C
61 Lou
Tel: (

D 1 A 0 9 9 2

W & C - Plymouth

Microbac Laboratories, Inc.

FOR LAB USE ONLY

Lab WO#

Project Manager

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

DELIVERY: ROBERT BLANCHARD

E-MAIL: [redacted]

PHONE: 508-830-4159 FAX: 508-732-0238

BILL TO: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

PURCHASE ORDER #

ATTENTION: ACCOUNTS PAYABLE

PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP

LOCATION: ID 11773

WELLS - QUARTERLY

ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL

ROBERT SCOTT

PHONE: CELL - 860-204-7988

FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # A9 (250 mL)	1/12/2021	8:47		X	WW	1	X	X											X			
Well # A9 (250 mL)	1/12/2021	8:47		X	WW	1			X	X								X				
Well # A9 (250 mL)(filtered)	1/12/2021	8:47		X	WW	1					X							X				
Well # A9 (250 mL)	1/12/2021	8:47		X	WW	1						X						X				
Well # A9 (250 mL)	1/12/2021	8:47		X	WW	1							X					X				
Well # A9 (250 mL)	1/12/2021	8:47		X	WW	1								X	X	X					X	
Well # A9 (40 mL vial) A9	1/12/2021	8:47		X	WW	2											X	X				
Well # A9 (40 mL vial) A9	1/12/2021	8:47		X	WW	2											X			X		

PRESERVATIVE VERIFIED Initials

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	1/12/21	
RECEIVED:		
RELINQUISHED:	1/12/21	13:11
ECEIVED:	1.12.2021	1311
ELINQUISHED:	1.12.2021	1605
ECEIVED:	1.12.21	1605

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE):

COOLED ☐ AMBIENT ☐ COMPLIANT ☐ 3-3°C

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A0993

Project Description

Wells - Quarterly

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630



Quality Assurance Officer

Melisa L. Montgomery

Thursday, January 21, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A0993

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Quarterly

Project / PO Number: 346346
Received: 01/12/2021
Reported: 01/21/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well A10	D1A0993-01	Groundwater	Grab		01/12/21 09:55	01/12/21 16:05
Well A10	D1A0993-02	Groundwater	Grab		01/12/21 09:55	01/12/21 16:05
Well A10 (filtered)	D1A0993-03	Groundwater	Grab		01/12/21 09:55	01/12/21 16:05
Well A10	D1A0993-04	Groundwater	Grab		01/12/21 09:55	01/12/21 16:05
Well A10	D1A0993-05	Groundwater	Grab		01/12/21 09:55	01/12/21 16:05
Well A10	D1A0993-06	Groundwater	Grab		01/12/21 09:55	01/12/21 16:05
Well A10	D1A0993-07	Groundwater	Grab		01/12/21 09:55	01/12/21 16:05

CERTIFICATE OF ANALYSIS

D1A0993

Analytical Testing Parameters

Client Sample ID: Well A10
Sample Matrix: Groundwater
Lab Sample ID: D1A0993-01
Collected By: Customer
Collection Date: 01/12/2021 9:55

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 351.1					**Method Notes:** D1			
Total Kjeldahl Nitrogen (TKN)	<0.400	0.400	mg/L	1		01/15/21 0932	01/15/21 1510	CLW
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	<0.0106	0.0106	mg/L	1		01/13/21 1800	01/14/21 1031	CLW

Client Sample ID: Well A10
Sample Matrix: Groundwater
Lab Sample ID: D1A0993-02
Collected By: Customer
Collection Date: 01/12/2021 9:55

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-NO_3^- F-2011								
Nitrate as N	**3.48**	0.0500	mg/L	1			01/12/21 1930	DJM
Nitrite as N	<0.0100	0.0100	mg/L	1	**Y1**		01/12/21 1930	DJM

Client Sample ID: Well A10 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1A0993-03
Collected By: Customer
Collection Date: 01/12/2021 9:55

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0110**	0.0100	mg/L	1		01/12/21 1745	01/12/21 1907	DJM

Client Sample ID: Well A10
Sample Matrix: Groundwater
Lab Sample ID: D1A0993-04
Collected By: Customer
Collection Date: 01/12/2021 9:55

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 2320 B-2011								
Alkalinity to pH 4.5	**37.5**	1.00	mg CaCO3/L	1			01/15/21 1635	MAD

Client Sample ID:	Well A10		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A0993-05	**Collection Date:**	01/12/2021 9:55

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-Cl E-2011								
Chloride	**423**	20.0	mg/L	10			01/18/21 1628	CLW

Client Sample ID:	Well A10		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A0993-06	**Collection Date:**	01/12/2021 9:55

Metals Total by ICP	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.7, Rv. 4.4 (1994)								
Boron	**0.133**	0.0050	mg/L	1	**Y1**	01/14/21 1433	01/15/21 1248	JDF
Copper	**0.0020**	0.0020	mg/L	1		01/14/21 1433	01/15/21 1248	JDF
Sodium	**271**	1.00	mg/L	1		01/14/21 1433	01/15/21 1248	JDF

CERTIFICATE OF ANALYSIS

D1A0993

Client Sample ID:	Well A10		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A0993-07	**Collection Date:**	01/12/2021 9:55

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acetone	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1705	JAN
Acrolein	<20.0	20.0	ug/L	1			01/14/21 1440	JAN
Acrylonitrile	<20.0	20.0	ug/L	1			01/19/21 1705	JAN
Benzene	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
Bromodichloromethane	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
Bromoform	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
Bromomethane	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
2-Butanone (MEK)	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1705	JAN
Carbon disulfide	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1705	JAN
Carbon tetrachloride	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
Chlorobenzene	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	1			01/14/21 1440	JAN
Chloroform	**4.56**	4.00	ug/L	1			01/19/21 1705	JAN
Chloromethane	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
Dibromochloromethane	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1705	JAN
1,2-Dichlorobenzene	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
1,3-Dichlorobenzene	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
1,4-Dichlorobenzene	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1705	JAN
1,2-Dichloroethane	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
1,1-Dichloroethane	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
cis-1,2-Dichloroethene	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1705	JAN
1,1-Dichloroethene	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
trans-1,2-Dichloroethene	<4.00	4.00	ug/L	1			01/19/21 1705	JAN
1,2-Dichloropropane	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
cis-1,3-Dichloropropene	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
trans-1,3-Dichloropropene	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
Ethylbenzene	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
2-Hexanone (MBK)	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1705	JAN
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1705	JAN
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L	1			01/19/21 1705	JAN
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1705	JAN
Styrene	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1705	JAN
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
Tetrachloroethene	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
Toluene	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
1,1,2-Trichloroethane	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
1,1,1-Trichloroethane	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
Trichloroethene	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L	1			01/19/21 1705	JAN

CERTIFICATE OF ANALYSIS

D1A0993

Client Sample ID:	Well A10		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A0993-07	**Collection Date:**	01/12/2021 9:55

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Vinyl chloride	<5.00	5.00	ug/L	1			01/19/21 1705	JAN
m,p-Xylene	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1705	JAN
o-Xylene	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1705	JAN
Vinyl acetate	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1705	JAN
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 70-130	% Rec	1			01/19/21 1705	JAN
Surrogate: 1,2-Dichloroethane-d4	100	Limit: 70-130	% Rec	1			01/14/21 1440	JAN
Surrogate: Toluene-d8	101	Limit: 70-130	% Rec	1			01/14/21 1440	JAN
Surrogate: Toluene-d8	103	Limit: 70-130	% Rec	1			01/19/21 1705	JAN
Surrogate: Pentafluorobenzene	82.8	Limit: 70-130	% Rec	1			01/14/21 1440	JAN

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-$NO3^-$ F-2011	DA10585	DA10585-DUP1	D1A0933-01
		DA10585-DUP1	D1A0933-01
		DA10585-MS1	D1A0933-01
		DA10585-MS1	D1A0933-01
		DA10585-MSD1	D1A0933-01
		DA10585-MSD1	D1A0933-01
		DA10585-BS1	
		DA10585-BS2	
		DA10585-BLK1	
		DA10585-BLK1	
		D1A0993-02	Well A10
		D1A0993-02	Well A10

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DA10618	DA10618-BLK1	
		DA10618-BS1	
		DA10618-MS2	D1A0858-05
		D1A0993-03	Well A10 (filtered)
		DA10618-DUP1	D1A0858-04
		DA10618-MS1	D1A0858-04

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DA10683	DA10683-BS1	
		DA10683-BLK1	
		D1A0993-01	Well A10
		DA10683-DUP1	D1A0991-01
		DA10683-MS2	L1A0117-01
		DA10683-MS1	D1A0991-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.7, Rv. 4.4 (1994)	DA10755	DA10755-BLK1	
		DA10755-BS1	
		DA10755-DUP1	D1A0991-06
		DA10755-MS1	D1A1127-09
		D1A0993-06	Well A10
		D1A0993-06	Well A10
		DA10755-MS2	L1A0151-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 351.1	DA10811	DA10811-BS1	
		DA10811-MS1	D1A0991-01

EPA 351.1	DA10811	DA10811-MS2	D1A0994-01
		D1A0993-01	Well A10
		DA10811-DUP1	D1A0991-01
		DA10811-BLK1	

Method	Batch	Laboratory ID	Client / Source ID
SM 2320 B-2011	DA10868	DA10868-BS1	
		DA10868-DUP1	D1A0979-08
		DA10868-BLK1	
		D1A0993-04	Well A10

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-Cl E-2011	DA10893	DA10893-BS1	
		DA10893-BLK1	
		DA10893-DUP1	D1A1288-05
		DA10893-MS1	D1A1288-05
		DA10893-MSD1	D1A1288-05
		D1A0993-05	Well A10

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DA10912	DA10912-BS1	
		DA10912-BLK1	
		D1A0993-07	Well A10
		DA10912-MS1	D1A0994-07
		DA10912-MSD1	D1A0994-07

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DA11088	DA11088-BLK1	
		D1A0993-07	Well A10
		DA11088-MS1	D1A0991-07
		DA11088-MSD1	D1A0991-07

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10585 - Wet Chem - W - SM 4500-NO_3^- F-2011										
Blank (DA10585-BLK1)			Prepared & Analyzed: 01/12/2021							
Nitrite as N	<0.0100	0.0100	mg/L							
Nitrate as N	<0.0500	0.0500	mg/L							
LCS (DA10585-BS1)			Prepared & Analyzed: 01/12/2021							
Nitrate as N	5.24	0.0500	mg/L	5.00		105	90-110			
LCS (DA10585-BS2)			Prepared & Analyzed: 01/12/2021							
Nitrite as N	0.972	0.0100	mg/L	1.00		97.2	90-110			
Duplicate (DA10585-DUP1)		**Source: D1A0933-01**	Prepared & Analyzed: 01/12/2021							

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10585 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Duplicate (DA10585-DUP1)		**Source: D1A0933-01**	Prepared & Analyzed: 01/12/2021							
Nitrite as N	<0.0100	0.0100	mg/L		ND				20	R3
Nitrate as N	<0.0500	0.0500	mg/L		ND				20	
Matrix Spike (DA10585-MS1)		**Source: D1A0933-01**	Prepared & Analyzed: 01/12/2021							
Nitrite as N	0.989	0.0100	mg/L	1.00	ND	98.9	75-125			
Nitrate as N	4.98	0.0500	mg/L	5.00	ND	99.5	75-125			
Matrix Spike Dup (DA10585-MSD1)		**Source: D1A0933-01**	Prepared & Analyzed: 01/12/2021							
Nitrite as N	0.977	0.0100	mg/L	1.00	ND	97.7	75-125	1.29	20	
Nitrate as N	4.94	0.0500	mg/L	5.00	ND	98.7	75-125	0.825	20	
Batch DA10618 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10618-BLK1)			Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DA10618-BS1)			Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	0.988	0.0100	mg/L	1.00		98.7	90-110			
Duplicate (DA10618-DUP1)		**Source: D1A0858-04**	Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	4.00	0.0400	mg/L		4.00			0.125	20	
Matrix Spike (DA10618-MS1)		**Source: D1A0858-04**	Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	4.98	0.0400	mg/L	1.00	4.00	98.3	90-110			
Matrix Spike (DA10618-MS2)		**Source: D1A0858-05**	Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	1.24	0.0100	mg/L	1.00	0.286	94.8	90-110			
Batch DA10683 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10683-BLK1)			Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DA10683-BS1)			Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	0.983	0.0106	mg/L	1.00		98.3	90-110			
Duplicate (DA10683-DUP1)		**Source: D1A0991-01**	Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	2.73	0.0213	mg/L		2.79			1.92	20	
Matrix Spike (DA10683-MS1)		**Source: D1A0991-01**	Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	4.06	0.0425	mg/L	1.25	2.79	102	90-110			
Matrix Spike (DA10683-MS2)		**Source: L1A0117-01**	Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	2.58	0.0213	mg/L	1.25	1.36	97.4	90-110			
Batch DA10811 - Wet-Digestion-W - EPA 351.1										
Blank (DA10811-BLK1)			Prepared & Analyzed: 01/15/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L							
LCS (DA10811-BS1)			Prepared & Analyzed: 01/15/2021							
Total Kjeldahl Nitrogen (TKN)	5.01	0.200	mg/L	5.00		100	90-110			
Duplicate (DA10811-DUP1)		**Source: D1A0991-01**	Prepared & Analyzed: 01/15/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L		ND				20	

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10811 - Wet-Digestion-W - EPA 351.1										
Matrix Spike (DA10811-MS1)		**Source: D1A0991-01**		Prepared & Analyzed: 01/15/2021						
Total Kjeldahl Nitrogen (TKN)	10.1	0.200	mg/L	10.0	ND	101	90-110			
Matrix Spike (DA10811-MS2)		**Source: D1A0994-01**		Prepared & Analyzed: 01/15/2021						
Total Kjeldahl Nitrogen (TKN)	10.2	0.200	mg/L	10.0	ND	102	90-110			
Batch DA10868 - Wet Chem - W - SM 2320 B-2011										
Blank (DA10868-BLK1)				Prepared & Analyzed: 01/15/2021						
Alkalinity to pH 4.5	<1.00	1.00	mg CaCO3/ L							
LCS (DA10868-BS1)				Prepared & Analyzed: 01/15/2021						
Alkalinity to pH 4.5	50.0	1.00	mg CaCO3/ L	50.0		100	90-110			
Duplicate (DA10868-DUP1)		**Source: D1A0979-08**		Prepared & Analyzed: 01/15/2021						
Alkalinity to pH 4.5	47.5	1.00	mg CaCO3/ L		47.5			0.00	20	
Batch DA10893 - Wet Chem - W - SM 4500-Cl E-2011										
Blank (DA10893-BLK1)				Prepared & Analyzed: 01/18/2021						
Chloride	<2.00	2.00	mg/L							
LCS (DA10893-BS1)				Prepared & Analyzed: 01/18/2021						
Chloride	19.5	2.00	mg/L	20.0		97.4	90-110			
Duplicate (DA10893-DUP1)		**Source: D1A1288-05**		Prepared & Analyzed: 01/18/2021						
Chloride	13.8	2.00	mg/L		13.8			0.0153	20	
Matrix Spike (DA10893-MS1)		**Source: D1A1288-05**		Prepared & Analyzed: 01/18/2021						
Chloride	34.2	2.00	mg/L	20.0	13.8	102	75-125			
Matrix Spike Dup (DA10893-MSD1)		**Source: D1A1288-05**		Prepared & Analyzed: 01/18/2021						
Chloride	34.6	2.00	mg/L	20.0	13.8	104	75-125	0.964	20	

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10755 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DA10755-BLK1)				Prepared: 01/14/2021 Analyzed: 01/15/2021						
Boron	<0.0050	0.0050	mg/L							
Copper	<0.0020	0.0020	mg/L							
Sodium	<1.00	1.00	mg/L							
LCS (DA10755-BS1)				Prepared: 01/14/2021 Analyzed: 01/15/2021						
Boron	0.495	0.0050	mg/L	0.500		99.0	85-115			
Copper	0.519	0.0020	mg/L	0.500		104	85-115			
Sodium	10.4	1.00	mg/L	10.5		98.8	85-115			
Duplicate (DA10755-DUP1)		**Source: D1A0991-06**		Prepared: 01/14/2021 Analyzed: 01/15/2021						

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10755 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Duplicate (DA10755-DUP1)	**Source: D1A0991-06**		Prepared: 01/14/2021 Analyzed: 01/15/2021							
Boron	0.0634	0.0050	mg/L		0.0638			0.605	20	
Copper	<0.0020	0.0020	mg/L		0.0020			200	20	R3
Sodium	102	1.00	mg/L		99.7			1.98	20	
Matrix Spike (DA10755-MS1)	**Source: D1A1127-09**		Prepared: 01/14/2021 Analyzed: 01/15/2021							
Boron	0.607	0.0050	mg/L	0.500	0.119	97.5	70-130			
Copper	0.534	0.0020	mg/L	0.500	0.0152	104	70-130			
Sodium	87.1	1.00	mg/L	10.5	77.0	96.9	70-130			
Matrix Spike (DA10755-MS2)	**Source: L1A0151-01**		Prepared: 01/14/2021 Analyzed: 01/15/2021							
Boron	0.575	0.0050	mg/L	0.500	0.0876	97.5	70-130			
Copper	0.523	0.0020	mg/L	0.500	0.0039	104	70-130			
Sodium	129	1.00	mg/L	10.5	119	101	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10912 - 624.1 - EPA 624.1										
Blank (DA10912-BLK1)			Prepared & Analyzed: 01/14/2021							
Acrolein	<20.0	20.0	ug/L							
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*49.4*		ug/L	*50.0*		*98.8*	*70-130*			
Surrogate: Toluene-d8	*50.1*		ug/L	*50.0*		*100*	*70-130*			
Surrogate: Pentafluorobenzene	*39.7*		ug/L	*50.0*		*79.5*	*70-130*			
LCS (DA10912-BS1)			Prepared & Analyzed: 01/14/2021							
Acrolein	37.3	20.0	ug/L	50.0		74.5	60-140			
2-Chloroethyl vinyl ether	27.3	20.0	ug/L	50.0		54.7	1-305			
Surrogate: 1,2-Dichloroethane-d4	*45.9*		ug/L	*50.0*		*91.9*	*70-130*			
Surrogate: Toluene-d8	*48.5*		ug/L	*50.0*		*97.0*	*70-130*			
Surrogate: Pentafluorobenzene	*43.3*		ug/L	*50.0*		*86.5*	*70-130*			
Matrix Spike (DA10912-MS1)	**Source: D1A0994-07**		Prepared & Analyzed: 01/14/2021							
Acrolein	41.5	20.0	ug/L	50.0	ND	83.0	40-160			
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0	ND	25.5	1-305			
Surrogate: 1,2-Dichloroethane-d4	*50.7*		ug/L	*50.0*		*101*	*70-130*			
Surrogate: Toluene-d8	*51.0*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Pentafluorobenzene	*42.4*		ug/L	*50.0*		*84.9*	*70-130*			
Matrix Spike Dup (DA10912-MSD1)	**Source: D1A0994-07**		Prepared & Analyzed: 01/14/2021							
Acrolein	39.2	20.0	ug/L	50.0	ND	78.3	40-160	5.80	60	
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0	ND	25.7	1-305	0.625	71	
Surrogate: 1,2-Dichloroethane-d4	*49.6*		ug/L	*50.0*		*99.2*	*70-130*			
Surrogate: Toluene-d8	*51.4*		ug/L	*50.0*		*103*	*70-130*			
Surrogate: Pentafluorobenzene	*41.7*		ug/L	*50.0*		*83.4*	*70-130*			
Batch DA11088 - 624.1 - EPA 624.1										
Blank (DA11088-BLK1)			Prepared & Analyzed: 01/19/2021							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11088 - 624.1 - EPA 624.1										
Blank (DA11088-BLK1)			Prepared & Analyzed: 01/19/2021							
Acetone	<10.0	10.0	ug/L							
Acrylonitrile	<20.0	20.0	ug/L							
Benzene	<5.00	5.00	ug/L							
Bromodichloromethane	<5.00	5.00	ug/L							
Bromoform	<5.00	5.00	ug/L							
Bromomethane	<5.00	5.00	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Carbon disulfide	<5.00	5.00	ug/L							
Carbon tetrachloride	<5.00	5.00	ug/L							
Chlorobenzene	<5.00	5.00	ug/L							
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L							
Chloroform	<4.00	4.00	ug/L							
Chloromethane	<5.00	5.00	ug/L							
Dibromochloromethane	<5.00	5.00	ug/L							
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L							
1,2-Dichlorobenzene	<5.00	5.00	ug/L							
1,3-Dichlorobenzene	<5.00	5.00	ug/L							
1,4-Dichlorobenzene	<5.00	5.00	ug/L							
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L							
1,2-Dichloroethane	<5.00	5.00	ug/L							
1,1-Dichloroethane	<5.00	5.00	ug/L							
cis-1,2-Dichloroethene	<5.00	5.00	ug/L							
1,1-Dichloroethene	<5.00	5.00	ug/L							
trans-1,2-Dichloroethene	<4.00	4.00	ug/L							
1,2-Dichloropropane	<5.00	5.00	ug/L							
cis-1,3-Dichloropropene	<5.00	5.00	ug/L							
trans-1,3-Dichloropropene	<5.00	5.00	ug/L							
Ethylbenzene	<5.00	5.00	ug/L							
2-Hexanone (MBK)	<10.0	10.0	ug/L							
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L							
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L							
Styrene	<5.00	5.00	ug/L							
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L							
Tetrachloroethene	<5.00	5.00	ug/L							
Toluene	<5.00	5.00	ug/L							
1,1,2-Trichloroethane	<5.00	5.00	ug/L							
1,1,1-Trichloroethane	<5.00	5.00	ug/L							
Trichloroethene	<5.00	5.00	ug/L							
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L							
Vinyl chloride	<5.00	5.00	ug/L							
m,p-Xylene	<10.0	10.0	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11088 - 624.1 - EPA 624.1										
Blank (DA11088-BLK1)				Prepared & Analyzed: 01/19/2021						
o-Xylene	<5.00	5.00	ug/L							
Vinyl acetate	<5.00	5.00	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*50.9*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Toluene-d8	*51.8*		ug/L	*50.0*		*104*	*70-130*			
Matrix Spike (DA11088-MS1)	**Source: D1A0991-07**			Prepared & Analyzed: 01/19/2021						
Acetone	31.7	10.0	ug/L	50.0	ND	63.5	0-200			
Acrylonitrile	44.0	20.0	ug/L	50.0	ND	88.1	40-160			
Benzene	52.3	5.00	ug/L	50.0	ND	105	37-151			
Bromodichloromethane	51.5	5.00	ug/L	50.0	ND	103	35-155			
Bromoform	48.3	5.00	ug/L	50.0	ND	96.7	45-169			
Bromomethane	42.5	5.00	ug/L	50.0	ND	85.0	1-242			
2-Butanone (MEK)	38.6	10.0	ug/L	50.0	ND	77.2	0-200			
Carbon disulfide	48.7	5.00	ug/L	50.0	ND	97.3	0-200			
Carbon tetrachloride	55.4	5.00	ug/L	50.0	ND	111	70-140			
Chlorobenzene	50.3	5.00	ug/L	50.0	ND	101	37-160			
Chloroethane (Ethyl chloride)	33.6	5.00	ug/L	50.0	ND	67.1	14-230			
Chloroform	54.9	4.00	ug/L	50.0	ND	110	51-138			
Chloromethane	49.5	5.00	ug/L	50.0	ND	98.9	1-273			
Dibromochloromethane	49.5	5.00	ug/L	50.0	ND	99.1	53-149			
Dibromomethane (Methylene bromide)	51.5	5.00	ug/L	50.0	ND	103	0-200			
1,2-Dichlorobenzene	45.7	5.00	ug/L	50.0	ND	91.3	18-190			
1,3-Dichlorobenzene	45.9	5.00	ug/L	50.0	ND	91.9	59-156			
1,4-Dichlorobenzene	43.9	5.00	ug/L	50.0	ND	87.7	18-190			
Dichlorodifluoromethane (Freon-12)	46.3	5.00	ug/L	50.0	ND	92.6	0-200			
1,2-Dichloroethane	52.6	5.00	ug/L	50.0	ND	105	49-155			
1,1-Dichloroethane	50.5	5.00	ug/L	50.0	ND	101	59-155			
cis-1,2-Dichloroethene	49.8	5.00	ug/L	50.0	ND	99.5	0-200			
1,1-Dichloroethene	50.5	5.00	ug/L	50.0	ND	101	1-234			
trans-1,2-Dichloroethene	54.8	4.00	ug/L	50.0	ND	110	54-156			
1,2-Dichloropropane	50.2	5.00	ug/L	50.0	ND	100	1-210			
cis-1,3-Dichloropropene	49.3	5.00	ug/L	50.0	ND	98.6	1-227			
trans-1,3-Dichloropropene	46.7	5.00	ug/L	50.0	ND	93.4	17-183			
Ethylbenzene	49.7	5.00	ug/L	50.0	ND	99.3	37-162			
2-Hexanone (MBK)	39.1	10.0	ug/L	50.0	ND	78.2	0-200			
Methyl tert-butyl ether (MTBE)	45.5	5.00	ug/L	50.0	ND	91.0	0-200			
Methylene chloride (Dichloromethane)	52.0	1.00	ug/L	50.0	ND	104	1-221			
4-Methyl-2-pentanone (MIBK)	38.4	10.0	ug/L	50.0	ND	76.8	0-200			
Styrene	52.4	5.00	ug/L	50.0	ND	105	0-200			
1,1,2,2-Tetrachloroethane	56.9	5.00	ug/L	50.0	ND	114	46-157			
Tetrachloroethene	50.7	5.00	ug/L	50.0	ND	101	64-148			
Toluene	49.6	5.00	ug/L	50.0	ND	99.2	47-150			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11088 - 624.1 - EPA 624.1										
Matrix Spike (DA11088-MS1)	**Source: D1A0991-07**		Prepared & Analyzed: 01/19/2021							
1,1,2-Trichloroethane	47.4	5.00	ug/L	50.0	ND	94.7	52-150			
1,1,1-Trichloroethane	56.5	5.00	ug/L	50.0	ND	113	52-162			
Trichloroethene	50.9	5.00	ug/L	50.0	ND	102	70-157			
Trichlorofluoromethane (Freon 11)	40.6	5.00	ug/L	50.0	ND	81.2	17-181			
Vinyl chloride	49.7	5.00	ug/L	50.0	ND	99.5	1-251			
m,p-Xylene	106	10.0	ug/L	100	ND	106	0-200			
o-Xylene	50.4	5.00	ug/L	50.0	ND	101	0-200			
Vinyl acetate	58.9	5.00	ug/L	50.0	ND	118	60-140			
Surrogate: 1,2-Dichloroethane-d4	*49.1*		ug/L	*50.0*		*98.2*	*70-130*			
Surrogate: Toluene-d8	*49.1*		ug/L	*50.0*		*98.2*	*70-130*			
Surrogate: Pentafluorobenzene	*50.5*		ug/L	*50.0*		*101*	*70-130*			
Matrix Spike Dup (DA11088-MSD1)	**Source: D1A0991-07**		Prepared & Analyzed: 01/19/2021							
Acetone	33.1	10.0	ug/L	50.0	ND	66.2	0-200	4.19	200	
Acrylonitrile	42.1	20.0	ug/L	50.0	ND	84.2	40-160	4.46	60	
Benzene	51.1	5.00	ug/L	50.0	ND	102	37-151	2.32	61	
Bromodichloromethane	47.9	5.00	ug/L	50.0	ND	95.7	35-155	7.29	56	
Bromoform	48.0	5.00	ug/L	50.0	ND	96.0	45-169	0.664	42	
Bromomethane	43.4	5.00	ug/L	50.0	ND	86.7	1-242	2.00	61	
2-Butanone (MEK)	36.9	10.0	ug/L	50.0	ND	73.8	0-200	4.50	200	
Carbon disulfide	46.6	5.00	ug/L	50.0	ND	93.2	0-200	4.35	200	
Carbon tetrachloride	54.5	5.00	ug/L	50.0	ND	109	70-140	1.71	41	
Chlorobenzene	48.8	5.00	ug/L	50.0	ND	97.5	37-160	3.15	53	
Chloroethane (Ethyl chloride)	30.6	5.00	ug/L	50.0	ND	61.3	14-230	9.13	78	
Chloroform	53.0	4.00	ug/L	50.0	ND	106	51-138	3.62	54	
Chloromethane	49.3	5.00	ug/L	50.0	ND	98.5	1-273	0.405	60	
Dibromochloromethane	48.8	5.00	ug/L	50.0	ND	97.5	53-149	1.57	50	
Dibromomethane (Methylene bromide)	50.6	5.00	ug/L	50.0	ND	101	0-200	1.68	200	
1,2-Dichlorobenzene	43.4	5.00	ug/L	50.0	ND	86.8	18-190	5.03	57	
1,3-Dichlorobenzene	43.8	5.00	ug/L	50.0	ND	87.6	59-156	4.77	43	
1,4-Dichlorobenzene	42.6	5.00	ug/L	50.0	ND	85.2	18-190	2.96	57	
Dichlorodifluoromethane (Freon-12)	48.3	5.00	ug/L	50.0	ND	96.5	0-200	4.15	200	
1,2-Dichloroethane	52.4	5.00	ug/L	50.0	ND	105	49-155	0.381	49	
1,1-Dichloroethane	49.8	5.00	ug/L	50.0	ND	99.7	59-155	1.39	40	
cis-1,2-Dichloroethene	48.1	5.00	ug/L	50.0	ND	96.2	0-200	3.41	200	
1,1-Dichloroethene	49.1	5.00	ug/L	50.0	ND	98.2	1-234	2.81	32	
trans-1,2-Dichloroethene	54.1	4.00	ug/L	50.0	ND	108	54-156	1.12	45	
1,2-Dichloropropane	49.7	5.00	ug/L	50.0	ND	99.4	1-210	1.02	55	
cis-1,3-Dichloropropene	48.9	5.00	ug/L	50.0	ND	97.8	1-227	0.753	58	
trans-1,3-Dichloropropene	45.5	5.00	ug/L	50.0	ND	91.0	17-183	2.67	86	
Ethylbenzene	48.0	5.00	ug/L	50.0	ND	96.0	37-162	3.42	63	
2-Hexanone (MBK)	38.3	10.0	ug/L	50.0	ND	76.6	0-200	2.09	200	
Methyl tert-butyl ether (MTBE)	44.2	5.00	ug/L	50.0	ND	88.4	0-200	2.94	200	

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11088 - 624.1 - EPA 624.1										
Matrix Spike Dup (DA11088-MSD1)	**Source: D1A0991-07**		Prepared & Analyzed: 01/19/2021							
Methylene chloride (Dichloromethane)	50.1	1.00	ug/L	50.0	ND	100	1-221	3.70	28	
4-Methyl-2-pentanone (MIBK)	38.4	10.0	ug/L	50.0	ND	76.7	0-200	0.130	200	
Styrene	51.2	5.00	ug/L	50.0	ND	102	0-200	2.28	200	
1,1,2,2-Tetrachloroethane	53.0	5.00	ug/L	50.0	ND	106	46-157	6.97	61	
Tetrachloroethene	48.5	5.00	ug/L	50.0	ND	97.0	64-148	4.48	39	
Toluene	47.3	5.00	ug/L	50.0	ND	94.6	47-150	4.71	41	
1,1,2-Trichloroethane	46.3	5.00	ug/L	50.0	ND	92.5	52-150	2.35	45	
1,1,1-Trichloroethane	55.2	5.00	ug/L	50.0	ND	110	52-162	2.29	36	
Trichloroethene	49.8	5.00	ug/L	50.0	ND	99.6	70-157	2.18	48	
Trichlorofluoromethane (Freon 11)	39.6	5.00	ug/L	50.0	ND	79.2	17-181	2.49	84	
Vinyl chloride	48.6	5.00	ug/L	50.0	ND	97.1	1-251	2.40	66	
m,p-Xylene	102	10.0	ug/L	100	ND	102	0-200	3.51	200	
o-Xylene	49.2	5.00	ug/L	50.0	ND	98.3	0-200	2.49	200	
Vinyl acetate	57.5	5.00	ug/L	50.0	ND	115	60-140	2.37	25	
Surrogate: 1,2-Dichloroethane-d4	*48.3*		ug/L	*50.0*		*96.7*	*70-130*			
Surrogate: Toluene-d8	*48.2*		ug/L	*50.0*		*96.4*	*70-130*			
Surrogate: Pentafluorobenzene	*51.3*		ug/L	*50.0*		*103*	*70-130*			

Definitions

D1:	The sample was diluted during sample preparation (extraction, distillation or digestion) due to matrix interference.
mg CaCO3/L	Milligrams Calcium Carbonate per Liter
mg/L:	Milligrams per Liter
R3:	Duplicate RPD is outside of acceptance criteria. The difference between the results is less than 2x Method Reporting Limit.
RL:	Reporting Limit
RPD:	Relative Percent Difference
ug/L:	Micrograms per Liter
Y1:	Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.3°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008 Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:

Melisa L. Montgomery

Quality Assurance Officer

Reported: 01/21/2021 13:33

MICROBAC

Microbac Laboratories, Inc.

61 Lo
Tel: (

D 1 A 0 9 9 3

W & C - Plymouth

FOR LAB USE ONLY

Lab WO#

Project Manager

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

DELIVERY: ROBERT BLANCHARD

E-MAIL: robert.blanchard@woodcurran.com

PHONE: 508-830-4159 FAX: 508-732-0238

BILL TO: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

PURCHASE ORDER #

ATTENTION: ACCOUNTS PAYABLE

PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP

LOCATION: ID 11773

WELLS - QUARTERLY

ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL

ROBERT SCOTT

PHONE: CELL - 860-204-7988

FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # A10 (250 mL)	1/12/2021	9:55		X	WW	1	X	X											X			
Well # A10 (250 mL)	1/12/2021	9:55		X	WW	1			X	X								X				
Well # A10 (250 mL)(filtered)	1/12/2021	9:55		X	WW	1					X							X				
Well # A10 (250 mL)	1/12/2021	9:55		X	WW	1						X						X				
Well # A10 (250 mL)	1/12/2021	9:55		X	WW	1							X					X				
Well # A10 (250 mL)	1/12/2021	9:55		X	WW	1								X	X	X					X	
Well # A10 (40 mL vial) A10	1/12/2021	9:55		X	WW	2			PRESERVATION VERIFIED Initials								X	X				
Well # A10 (40 mL vial) A10	1/12/2021	9:55		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	1/12/21	
RECEIVED:		
RELINQUISHED:	1/12/21	13:11
CEIVED:	1.12.2021	1311
LINQUISHED:	1.12.2021	1605
CEIVED:	1-12-21	1605

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☐ AMBIENT ☐ 3.3°C

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A0994

Project Description

Wells - Quarterly

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630



Quality Assurance Officer

Melisa L. Montgomery

Thursday, January 21, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A0994

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Quarterly

Project / PO Number: 346346
Received: 01/12/2021
Reported: 01/21/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well A11	D1A0994-01	Groundwater	Grab		01/12/21 11:46	01/12/21 16:05
Well A11	D1A0994-02	Groundwater	Grab		01/12/21 11:46	01/12/21 16:05
Well A11 (filtered)	D1A0994-03	Groundwater	Grab		01/12/21 11:46	01/12/21 16:05
Well A11	D1A0994-04	Groundwater	Grab		01/12/21 11:46	01/12/21 16:05
Well A11	D1A0994-05	Groundwater	Grab		01/12/21 11:46	01/12/21 16:05
Well A11	D1A0994-06	Groundwater	Grab		01/12/21 11:46	01/12/21 16:05
Well A11	D1A0994-07	Groundwater	Grab		01/12/21 11:46	01/12/21 16:05

CERTIFICATE OF ANALYSIS

D1A0994

Analytical Testing Parameters

Client Sample ID: Well A11
Sample Matrix: Groundwater
Lab Sample ID: D1A0994-01
Collected By: Customer
Collection Date: 01/12/2021 11:46

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 351.1								
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L	1		01/15/21 0932	01/15/21 1456	CLW
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0159**	0.0106	mg/L	1		01/13/21 1800	01/14/21 1032	CLW

Client Sample ID: Well A11
Sample Matrix: Groundwater
Lab Sample ID: D1A0994-02
Collected By: Customer
Collection Date: 01/12/2021 11:46

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-NO_3^- F-2011								
Nitrate as N	**0.761**	0.0500	mg/L	1			01/12/21 1932	DJM
Nitrite as N	<0.0100	0.0100	mg/L	1	**Y1**		01/12/21 1932	DJM

Client Sample ID: Well A11 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1A0994-03
Collected By: Customer
Collection Date: 01/12/2021 11:46

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0370**	0.0100	mg/L	1		01/12/21 1745	01/12/21 1907	DJM

Client Sample ID: Well A11
Sample Matrix: Groundwater
Lab Sample ID: D1A0994-04
Collected By: Customer
Collection Date: 01/12/2021 11:46

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 2320 B-2011								
Alkalinity to pH 4.5	**7.00**	1.00	mg CaCO3/L	1			01/15/21 1635	MAD

Client Sample ID:	Well A11		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A0994-05	**Collection Date:**	01/12/2021 11:46

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-Cl E-2011								
Chloride	**155**	8.00	mg/L	4			01/18/21 1628	CLW

Client Sample ID:	Well A11		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A0994-06	**Collection Date:**	01/12/2021 11:46

Metals Total by ICP	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.7, Rv. 4.4 (1994)								
Boron	**0.0137**	0.0050	mg/L	1	**Y1**	01/14/21 1433	01/15/21 1251	JDF
Copper	**0.0025**	0.0020	mg/L	1		01/14/21 1433	01/15/21 1251	JDF
Sodium	**75.6**	1.00	mg/L	1		01/14/21 1433	01/15/21 1251	JDF

CERTIFICATE OF ANALYSIS

D1A0994

Client Sample ID:	Well A11		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A0994-07	**Collection Date:**	01/12/2021 11:46

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acetone	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1730	JAN
Acrolein	<20.0	20.0	ug/L	1			01/14/21 1505	JAN
Acrylonitrile	<20.0	20.0	ug/L	1			01/19/21 1730	JAN
Benzene	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
Bromodichloromethane	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
Bromoform	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
Bromomethane	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
2-Butanone (MEK)	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1730	JAN
Carbon disulfide	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1730	JAN
Carbon tetrachloride	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
Chlorobenzene	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	1			01/14/21 1505	JAN
Chloroform	<4.00	4.00	ug/L	1			01/19/21 1730	JAN
Chloromethane	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
Dibromochloromethane	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1730	JAN
1,2-Dichlorobenzene	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
1,3-Dichlorobenzene	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
1,4-Dichlorobenzene	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1730	JAN
1,2-Dichloroethane	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
1,1-Dichloroethane	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
cis-1,2-Dichloroethene	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1730	JAN
1,1-Dichloroethene	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
trans-1,2-Dichloroethene	<4.00	4.00	ug/L	1			01/19/21 1730	JAN
1,2-Dichloropropane	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
cis-1,3-Dichloropropene	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
trans-1,3-Dichloropropene	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
Ethylbenzene	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
2-Hexanone (MBK)	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1730	JAN
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1730	JAN
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L	1			01/19/21 1730	JAN
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1730	JAN
Styrene	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1730	JAN
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
Tetrachloroethene	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
Toluene	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
1,1,2-Trichloroethane	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
1,1,1-Trichloroethane	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
Trichloroethene	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L	1			01/19/21 1730	JAN

CERTIFICATE OF ANALYSIS

D1A0994

Client Sample ID:	Well A11		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A0994-07	**Collection Date:**	01/12/2021 11:46

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Vinyl chloride	<5.00	5.00	ug/L	1			01/19/21 1730	JAN
m,p-Xylene	<10.0	10.0	ug/L	1	**Y1**		01/19/21 1730	JAN
o-Xylene	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1730	JAN
Vinyl acetate	<5.00	5.00	ug/L	1	**Y1**		01/19/21 1730	JAN
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 70-130	% Rec	1			01/19/21 1730	JAN
Surrogate: 1,2-Dichloroethane-d4	97.4	Limit: 70-130	% Rec	1			01/14/21 1505	JAN
Surrogate: Toluene-d8	102	Limit: 70-130	% Rec	1			01/14/21 1505	JAN
Surrogate: Toluene-d8	102	Limit: 70-130	% Rec	1			01/19/21 1730	JAN
Surrogate: Pentafluorobenzene	80.9	Limit: 70-130	% Rec	1			01/14/21 1505	JAN

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-$NO3^-$ F-2011	DA10585	DA10585-DUP1	D1A0933-01
		DA10585-DUP1	D1A0933-01
		DA10585-MS1	D1A0933-01
		DA10585-MS1	D1A0933-01
		DA10585-MSD1	D1A0933-01
		DA10585-MSD1	D1A0933-01
		DA10585-BS1	
		DA10585-BS2	
		DA10585-BLK1	
		DA10585-BLK1	
		D1A0994-02	Well A11
		D1A0994-02	Well A11

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DA10618	DA10618-BLK1	
		DA10618-BS1	
		DA10618-MS2	D1A0858-05
		D1A0994-03	Well A11 (filtered)
		DA10618-DUP1	D1A0858-04
		DA10618-MS1	D1A0858-04

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DA10683	DA10683-BS1	
		DA10683-BLK1	
		D1A0994-01	Well A11
		DA10683-DUP1	D1A0991-01
		DA10683-MS2	L1A0117-01
		DA10683-MS1	D1A0991-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.7, Rv. 4.4 (1994)	DA10755	DA10755-BLK1	
		DA10755-BS1	
		DA10755-DUP1	D1A0991-06
		DA10755-MS1	D1A1127-09
		D1A0994-06	Well A11
		D1A0994-06	Well A11
		DA10755-MS2	L1A0151-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 351.1	DA10811	DA10811-BS1	
		DA10811-MS1	D1A0991-01

EPA 351.1	DA10811	D1A0994-01	Well A11
		DA10811-MS2	D1A0994-01
		DA10811-DUP1	D1A0991-01
		DA10811-BLK1	

Method	Batch	Laboratory ID	Client / Source ID
SM 2320 B-2011	DA10868	DA10868-BS1	
		DA10868-DUP1	D1A0979-08
		DA10868-BLK1	
		D1A0994-04	Well A11

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-Cl E-2011	DA10893	DA10893-BS1	
		DA10893-BLK1	
		DA10893-DUP1	D1A1288-05
		DA10893-MS1	D1A1288-05
		DA10893-MSD1	D1A1288-05
		D1A0994-05	Well A11

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DA10912	DA10912-BS1	
		DA10912-BLK1	
		D1A0994-07	Well A11
		DA10912-MS1	D1A0994-07
		DA10912-MSD1	D1A0994-07

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DA11088	DA11088-BLK1	
		D1A0994-07	Well A11
		DA11088-MS1	D1A0991-07
		DA11088-MSD1	D1A0991-07

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10585 - Wet Chem - W - SM 4500-NO_3^- F-2011										
Blank (DA10585-BLK1)			Prepared & Analyzed: 01/12/2021							
Nitrite as N	<0.0100	0.0100	mg/L							
Nitrate as N	<0.0500	0.0500	mg/L							
LCS (DA10585-BS1)			Prepared & Analyzed: 01/12/2021							
Nitrate as N	5.24	0.0500	mg/L	5.00		105	90-110			
LCS (DA10585-BS2)			Prepared & Analyzed: 01/12/2021							
Nitrite as N	0.972	0.0100	mg/L	1.00		97.2	90-110			
Duplicate (DA10585-DUP1)		**Source: D1A0933-01**	Prepared & Analyzed: 01/12/2021							

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10585 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Duplicate (DA10585-DUP1)		**Source: D1A0933-01**	Prepared & Analyzed: 01/12/2021							
Nitrite as N	<0.0100	0.0100	mg/L		ND				20	R3
Nitrate as N	<0.0500	0.0500	mg/L		ND				20	
Matrix Spike (DA10585-MS1)		**Source: D1A0933-01**	Prepared & Analyzed: 01/12/2021							
Nitrite as N	0.989	0.0100	mg/L	1.00	ND	98.9	75-125			
Nitrate as N	4.98	0.0500	mg/L	5.00	ND	99.5	75-125			
Matrix Spike Dup (DA10585-MSD1)		**Source: D1A0933-01**	Prepared & Analyzed: 01/12/2021							
Nitrite as N	0.977	0.0100	mg/L	1.00	ND	97.7	75-125	1.29	20	
Nitrate as N	4.94	0.0500	mg/L	5.00	ND	98.7	75-125	0.825	20	
Batch DA10618 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10618-BLK1)			Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DA10618-BS1)			Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	0.988	0.0100	mg/L	1.00		98.7	90-110			
Duplicate (DA10618-DUP1)		**Source: D1A0858-04**	Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	4.00	0.0400	mg/L		4.00			0.125	20	
Matrix Spike (DA10618-MS1)		**Source: D1A0858-04**	Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	4.98	0.0400	mg/L	1.00	4.00	98.3	90-110			
Matrix Spike (DA10618-MS2)		**Source: D1A0858-05**	Prepared & Analyzed: 01/12/2021							
Ortho-phosphate as P	1.24	0.0100	mg/L	1.00	0.286	94.8	90-110			
Batch DA10683 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10683-BLK1)			Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DA10683-BS1)			Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	0.983	0.0106	mg/L	1.00		98.3	90-110			
Duplicate (DA10683-DUP1)		**Source: D1A0991-01**	Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	2.73	0.0213	mg/L		2.79			1.92	20	
Matrix Spike (DA10683-MS1)		**Source: D1A0991-01**	Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	4.06	0.0425	mg/L	1.25	2.79	102	90-110			
Matrix Spike (DA10683-MS2)		**Source: L1A0117-01**	Prepared: 01/13/2021 Analyzed: 01/14/2021							
Phosphorus - Total as P	2.58	0.0213	mg/L	1.25	1.36	97.4	90-110			
Batch DA10811 - Wet-Digestion-W - EPA 351.1										
Blank (DA10811-BLK1)			Prepared & Analyzed: 01/15/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L							
LCS (DA10811-BS1)			Prepared & Analyzed: 01/15/2021							
Total Kjeldahl Nitrogen (TKN)	5.01	0.200	mg/L	5.00		100	90-110			
Duplicate (DA10811-DUP1)		**Source: D1A0991-01**	Prepared & Analyzed: 01/15/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L		ND				20	

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10811 - Wet-Digestion-W - EPA 351.1										
Matrix Spike (DA10811-MS1)		**Source: D1A0991-01**		Prepared & Analyzed: 01/15/2021						
Total Kjeldahl Nitrogen (TKN)	10.1	0.200	mg/L	10.0	ND	101	90-110			
Matrix Spike (DA10811-MS2)		**Source: D1A0994-01**		Prepared & Analyzed: 01/15/2021						
Total Kjeldahl Nitrogen (TKN)	10.2	0.200	mg/L	10.0	ND	102	90-110			
Batch DA10868 - Wet Chem - W - SM 2320 B-2011										
Blank (DA10868-BLK1)				Prepared & Analyzed: 01/15/2021						
Alkalinity to pH 4.5	<1.00	1.00	mg CaCO3/ L							
LCS (DA10868-BS1)				Prepared & Analyzed: 01/15/2021						
Alkalinity to pH 4.5	50.0	1.00	mg CaCO3/ L	50.0		100	90-110			
Duplicate (DA10868-DUP1)		**Source: D1A0979-08**		Prepared & Analyzed: 01/15/2021						
Alkalinity to pH 4.5	47.5	1.00	mg CaCO3/ L		47.5			0.00	20	
Batch DA10893 - Wet Chem - W - SM 4500-Cl E-2011										
Blank (DA10893-BLK1)				Prepared & Analyzed: 01/18/2021						
Chloride	<2.00	2.00	mg/L							
LCS (DA10893-BS1)				Prepared & Analyzed: 01/18/2021						
Chloride	19.5	2.00	mg/L	20.0		97.4	90-110			
Duplicate (DA10893-DUP1)		**Source: D1A1288-05**		Prepared & Analyzed: 01/18/2021						
Chloride	13.8	2.00	mg/L		13.8			0.0153	20	
Matrix Spike (DA10893-MS1)		**Source: D1A1288-05**		Prepared & Analyzed: 01/18/2021						
Chloride	34.2	2.00	mg/L	20.0	13.8	102	75-125			
Matrix Spike Dup (DA10893-MSD1)		**Source: D1A1288-05**		Prepared & Analyzed: 01/18/2021						
Chloride	34.6	2.00	mg/L	20.0	13.8	104	75-125	0.964	20	

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10755 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DA10755-BLK1)				Prepared: 01/14/2021 Analyzed: 01/15/2021						
Boron	<0.0050	0.0050	mg/L							
Copper	<0.0020	0.0020	mg/L							
Sodium	<1.00	1.00	mg/L							
LCS (DA10755-BS1)				Prepared: 01/14/2021 Analyzed: 01/15/2021						
Boron	0.495	0.0050	mg/L	0.500		99.0	85-115			
Copper	0.519	0.0020	mg/L	0.500		104	85-115			
Sodium	10.4	1.00	mg/L	10.5		98.8	85-115			
Duplicate (DA10755-DUP1)		**Source: D1A0991-06**		Prepared: 01/14/2021 Analyzed: 01/15/2021						

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10755 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Duplicate (DA10755-DUP1)	**Source: D1A0991-06**		Prepared: 01/14/2021 Analyzed: 01/15/2021							
Boron	0.0634	0.0050	mg/L		0.0638			0.605	20	
Copper	<0.0020	0.0020	mg/L		0.0020			200	20	R3
Sodium	102	1.00	mg/L		99.7			1.98	20	
Matrix Spike (DA10755-MS1)	**Source: D1A1127-09**		Prepared: 01/14/2021 Analyzed: 01/15/2021							
Boron	0.607	0.0050	mg/L	0.500	0.119	97.5	70-130			
Copper	0.534	0.0020	mg/L	0.500	0.0152	104	70-130			
Sodium	87.1	1.00	mg/L	10.5	77.0	96.9	70-130			
Matrix Spike (DA10755-MS2)	**Source: L1A0151-01**		Prepared: 01/14/2021 Analyzed: 01/15/2021							
Boron	0.575	0.0050	mg/L	0.500	0.0876	97.5	70-130			
Copper	0.523	0.0020	mg/L	0.500	0.0039	104	70-130			
Sodium	129	1.00	mg/L	10.5	119	101	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10912 - 624.1 - EPA 624.1										
Blank (DA10912-BLK1)			Prepared & Analyzed: 01/14/2021							
Acrolein	<20.0	20.0	ug/L							
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*49.4*		ug/L	*50.0*		*98.8*	*70-130*			
Surrogate: Toluene-d8	*50.1*		ug/L	*50.0*		*100*	*70-130*			
Surrogate: Pentafluorobenzene	*39.7*		ug/L	*50.0*		*79.5*	*70-130*			
LCS (DA10912-BS1)			Prepared & Analyzed: 01/14/2021							
Acrolein	37.3	20.0	ug/L	50.0		74.5	60-140			
2-Chloroethyl vinyl ether	27.3	20.0	ug/L	50.0		54.7	1-305			
Surrogate: 1,2-Dichloroethane-d4	*45.9*		ug/L	*50.0*		*91.9*	*70-130*			
Surrogate: Toluene-d8	*48.5*		ug/L	*50.0*		*97.0*	*70-130*			
Surrogate: Pentafluorobenzene	*43.3*		ug/L	*50.0*		*86.5*	*70-130*			
Matrix Spike (DA10912-MS1)	**Source: D1A0994-07**		Prepared & Analyzed: 01/14/2021							
Acrolein	41.5	20.0	ug/L	50.0	ND	83.0	40-160			
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0	ND	25.5	1-305			
Surrogate: 1,2-Dichloroethane-d4	*50.7*		ug/L	*50.0*		*101*	*70-130*			
Surrogate: Toluene-d8	*51.0*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Pentafluorobenzene	*42.4*		ug/L	*50.0*		*84.9*	*70-130*			
Matrix Spike Dup (DA10912-MSD1)	**Source: D1A0994-07**		Prepared & Analyzed: 01/14/2021							
Acrolein	39.2	20.0	ug/L	50.0	ND	78.3	40-160	5.80	60	
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0	ND	25.7	1-305	0.625	71	
Surrogate: 1,2-Dichloroethane-d4	*49.6*		ug/L	*50.0*		*99.2*	*70-130*			
Surrogate: Toluene-d8	*51.4*		ug/L	*50.0*		*103*	*70-130*			
Surrogate: Pentafluorobenzene	*41.7*		ug/L	*50.0*		*83.4*	*70-130*			
Batch DA11088 - 624.1 - EPA 624.1										
Blank (DA11088-BLK1)			Prepared & Analyzed: 01/19/2021							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11088 - 624.1 - EPA 624.1										
Blank (DA11088-BLK1)			Prepared & Analyzed: 01/19/2021							
Acetone	<10.0	10.0	ug/L							
Acrylonitrile	<20.0	20.0	ug/L							
Benzene	<5.00	5.00	ug/L							
Bromodichloromethane	<5.00	5.00	ug/L							
Bromoform	<5.00	5.00	ug/L							
Bromomethane	<5.00	5.00	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Carbon disulfide	<5.00	5.00	ug/L							
Carbon tetrachloride	<5.00	5.00	ug/L							
Chlorobenzene	<5.00	5.00	ug/L							
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L							
Chloroform	<4.00	4.00	ug/L							
Chloromethane	<5.00	5.00	ug/L							
Dibromochloromethane	<5.00	5.00	ug/L							
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L							
1,2-Dichlorobenzene	<5.00	5.00	ug/L							
1,3-Dichlorobenzene	<5.00	5.00	ug/L							
1,4-Dichlorobenzene	<5.00	5.00	ug/L							
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L							
1,2-Dichloroethane	<5.00	5.00	ug/L							
1,1-Dichloroethane	<5.00	5.00	ug/L							
cis-1,2-Dichloroethene	<5.00	5.00	ug/L							
1,1-Dichloroethene	<5.00	5.00	ug/L							
trans-1,2-Dichloroethene	<4.00	4.00	ug/L							
1,2-Dichloropropane	<5.00	5.00	ug/L							
cis-1,3-Dichloropropene	<5.00	5.00	ug/L							
trans-1,3-Dichloropropene	<5.00	5.00	ug/L							
Ethylbenzene	<5.00	5.00	ug/L							
2-Hexanone (MBK)	<10.0	10.0	ug/L							
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L							
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L							
Styrene	<5.00	5.00	ug/L							
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L							
Tetrachloroethene	<5.00	5.00	ug/L							
Toluene	<5.00	5.00	ug/L							
1,1,2-Trichloroethane	<5.00	5.00	ug/L							
1,1,1-Trichloroethane	<5.00	5.00	ug/L							
Trichloroethene	<5.00	5.00	ug/L							
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L							
Vinyl chloride	<5.00	5.00	ug/L							
m,p-Xylene	<10.0	10.0	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11088 - 624.1 - EPA 624.1										
Blank (DA11088-BLK1)				Prepared & Analyzed: 01/19/2021						
o-Xylene	<5.00	5.00	ug/L							
Vinyl acetate	<5.00	5.00	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*50.9*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Toluene-d8	*51.8*		ug/L	*50.0*		*104*	*70-130*			
Matrix Spike (DA11088-MS1)	**Source: D1A0991-07**			Prepared & Analyzed: 01/19/2021						
Acetone	31.7	10.0	ug/L	50.0	ND	63.5	0-200			
Acrylonitrile	44.0	20.0	ug/L	50.0	ND	88.1	40-160			
Benzene	52.3	5.00	ug/L	50.0	ND	105	37-151			
Bromodichloromethane	51.5	5.00	ug/L	50.0	ND	103	35-155			
Bromoform	48.3	5.00	ug/L	50.0	ND	96.7	45-169			
Bromomethane	42.5	5.00	ug/L	50.0	ND	85.0	1-242			
2-Butanone (MEK)	38.6	10.0	ug/L	50.0	ND	77.2	0-200			
Carbon disulfide	48.7	5.00	ug/L	50.0	ND	97.3	0-200			
Carbon tetrachloride	55.4	5.00	ug/L	50.0	ND	111	70-140			
Chlorobenzene	50.3	5.00	ug/L	50.0	ND	101	37-160			
Chloroethane (Ethyl chloride)	33.6	5.00	ug/L	50.0	ND	67.1	14-230			
Chloroform	54.9	4.00	ug/L	50.0	ND	110	51-138			
Chloromethane	49.5	5.00	ug/L	50.0	ND	98.9	1-273			
Dibromochloromethane	49.5	5.00	ug/L	50.0	ND	99.1	53-149			
Dibromomethane (Methylene bromide)	51.5	5.00	ug/L	50.0	ND	103	0-200			
1,2-Dichlorobenzene	45.7	5.00	ug/L	50.0	ND	91.3	18-190			
1,3-Dichlorobenzene	45.9	5.00	ug/L	50.0	ND	91.9	59-156			
1,4-Dichlorobenzene	43.9	5.00	ug/L	50.0	ND	87.7	18-190			
Dichlorodifluoromethane (Freon-12)	46.3	5.00	ug/L	50.0	ND	92.6	0-200			
1,2-Dichloroethane	52.6	5.00	ug/L	50.0	ND	105	49-155			
1,1-Dichloroethane	50.5	5.00	ug/L	50.0	ND	101	59-155			
cis-1,2-Dichloroethene	49.8	5.00	ug/L	50.0	ND	99.5	0-200			
1,1-Dichloroethene	50.5	5.00	ug/L	50.0	ND	101	1-234			
trans-1,2-Dichloroethene	54.8	4.00	ug/L	50.0	ND	110	54-156			
1,2-Dichloropropane	50.2	5.00	ug/L	50.0	ND	100	1-210			
cis-1,3-Dichloropropene	49.3	5.00	ug/L	50.0	ND	98.6	1-227			
trans-1,3-Dichloropropene	46.7	5.00	ug/L	50.0	ND	93.4	17-183			
Ethylbenzene	49.7	5.00	ug/L	50.0	ND	99.3	37-162			
2-Hexanone (MBK)	39.1	10.0	ug/L	50.0	ND	78.2	0-200			
Methyl tert-butyl ether (MTBE)	45.5	5.00	ug/L	50.0	ND	91.0	0-200			
Methylene chloride (Dichloromethane)	52.0	1.00	ug/L	50.0	ND	104	1-221			
4-Methyl-2-pentanone (MIBK)	38.4	10.0	ug/L	50.0	ND	76.8	0-200			
Styrene	52.4	5.00	ug/L	50.0	ND	105	0-200			
1,1,2,2-Tetrachloroethane	56.9	5.00	ug/L	50.0	ND	114	46-157			
Tetrachloroethene	50.7	5.00	ug/L	50.0	ND	101	64-148			
Toluene	49.6	5.00	ug/L	50.0	ND	99.2	47-150			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11088 - 624.1 - EPA 624.1										
Matrix Spike (DA11088-MS1)	**Source: D1A0991-07**		Prepared & Analyzed: 01/19/2021							
1,1,2-Trichloroethane	47.4	5.00	ug/L	50.0	ND	94.7	52-150			
1,1,1-Trichloroethane	56.5	5.00	ug/L	50.0	ND	113	52-162			
Trichloroethene	50.9	5.00	ug/L	50.0	ND	102	70-157			
Trichlorofluoromethane (Freon 11)	40.6	5.00	ug/L	50.0	ND	81.2	17-181			
Vinyl chloride	49.7	5.00	ug/L	50.0	ND	99.5	1-251			
m,p-Xylene	106	10.0	ug/L	100	ND	106	0-200			
o-Xylene	50.4	5.00	ug/L	50.0	ND	101	0-200			
Vinyl acetate	58.9	5.00	ug/L	50.0	ND	118	60-140			
Surrogate: 1,2-Dichloroethane-d4	*49.1*		ug/L	*50.0*		*98.2*	*70-130*			
Surrogate: Toluene-d8	*49.1*		ug/L	*50.0*		*98.2*	*70-130*			
Surrogate: Pentafluorobenzene	*50.5*		ug/L	*50.0*		*101*	*70-130*			
Matrix Spike Dup (DA11088-MSD1)	**Source: D1A0991-07**		Prepared & Analyzed: 01/19/2021							
Acetone	33.1	10.0	ug/L	50.0	ND	66.2	0-200	4.19	200	
Acrylonitrile	42.1	20.0	ug/L	50.0	ND	84.2	40-160	4.46	60	
Benzene	51.1	5.00	ug/L	50.0	ND	102	37-151	2.32	61	
Bromodichloromethane	47.9	5.00	ug/L	50.0	ND	95.7	35-155	7.29	56	
Bromoform	48.0	5.00	ug/L	50.0	ND	96.0	45-169	0.664	42	
Bromomethane	43.4	5.00	ug/L	50.0	ND	86.7	1-242	2.00	61	
2-Butanone (MEK)	36.9	10.0	ug/L	50.0	ND	73.8	0-200	4.50	200	
Carbon disulfide	46.6	5.00	ug/L	50.0	ND	93.2	0-200	4.35	200	
Carbon tetrachloride	54.5	5.00	ug/L	50.0	ND	109	70-140	1.71	41	
Chlorobenzene	48.8	5.00	ug/L	50.0	ND	97.5	37-160	3.15	53	
Chloroethane (Ethyl chloride)	30.6	5.00	ug/L	50.0	ND	61.3	14-230	9.13	78	
Chloroform	53.0	4.00	ug/L	50.0	ND	106	51-138	3.62	54	
Chloromethane	49.3	5.00	ug/L	50.0	ND	98.5	1-273	0.405	60	
Dibromochloromethane	48.8	5.00	ug/L	50.0	ND	97.5	53-149	1.57	50	
Dibromomethane (Methylene bromide)	50.6	5.00	ug/L	50.0	ND	101	0-200	1.68	200	
1,2-Dichlorobenzene	43.4	5.00	ug/L	50.0	ND	86.8	18-190	5.03	57	
1,3-Dichlorobenzene	43.8	5.00	ug/L	50.0	ND	87.6	59-156	4.77	43	
1,4-Dichlorobenzene	42.6	5.00	ug/L	50.0	ND	85.2	18-190	2.96	57	
Dichlorodifluoromethane (Freon-12)	48.3	5.00	ug/L	50.0	ND	96.5	0-200	4.15	200	
1,2-Dichloroethane	52.4	5.00	ug/L	50.0	ND	105	49-155	0.381	49	
1,1-Dichloroethane	49.8	5.00	ug/L	50.0	ND	99.7	59-155	1.39	40	
cis-1,2-Dichloroethene	48.1	5.00	ug/L	50.0	ND	96.2	0-200	3.41	200	
1,1-Dichloroethene	49.1	5.00	ug/L	50.0	ND	98.2	1-234	2.81	32	
trans-1,2-Dichloroethene	54.1	4.00	ug/L	50.0	ND	108	54-156	1.12	45	
1,2-Dichloropropane	49.7	5.00	ug/L	50.0	ND	99.4	1-210	1.02	55	
cis-1,3-Dichloropropene	48.9	5.00	ug/L	50.0	ND	97.8	1-227	0.753	58	
trans-1,3-Dichloropropene	45.5	5.00	ug/L	50.0	ND	91.0	17-183	2.67	86	
Ethylbenzene	48.0	5.00	ug/L	50.0	ND	96.0	37-162	3.42	63	
2-Hexanone (MBK)	38.3	10.0	ug/L	50.0	ND	76.6	0-200	2.09	200	
Methyl tert-butyl ether (MTBE)	44.2	5.00	ug/L	50.0	ND	88.4	0-200	2.94	200	

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11088 - 624.1 - EPA 624.1										
Matrix Spike Dup (DA11088-MSD1)	**Source: D1A0991-07**		Prepared & Analyzed: 01/19/2021							
Methylene chloride (Dichloromethane)	50.1	1.00	ug/L	50.0	ND	100	1-221	3.70	28	
4-Methyl-2-pentanone (MIBK)	38.4	10.0	ug/L	50.0	ND	76.7	0-200	0.130	200	
Styrene	51.2	5.00	ug/L	50.0	ND	102	0-200	2.28	200	
1,1,2,2-Tetrachloroethane	53.0	5.00	ug/L	50.0	ND	106	46-157	6.97	61	
Tetrachloroethene	48.5	5.00	ug/L	50.0	ND	97.0	64-148	4.48	39	
Toluene	47.3	5.00	ug/L	50.0	ND	94.6	47-150	4.71	41	
1,1,2-Trichloroethane	46.3	5.00	ug/L	50.0	ND	92.5	52-150	2.35	45	
1,1,1-Trichloroethane	55.2	5.00	ug/L	50.0	ND	110	52-162	2.29	36	
Trichloroethene	49.8	5.00	ug/L	50.0	ND	99.6	70-157	2.18	48	
Trichlorofluoromethane (Freon 11)	39.6	5.00	ug/L	50.0	ND	79.2	17-181	2.49	84	
Vinyl chloride	48.6	5.00	ug/L	50.0	ND	97.1	1-251	2.40	66	
m,p-Xylene	102	10.0	ug/L	100	ND	102	0-200	3.51	200	
o-Xylene	49.2	5.00	ug/L	50.0	ND	98.3	0-200	2.49	200	
Vinyl acetate	57.5	5.00	ug/L	50.0	ND	115	60-140	2.37	25	
Surrogate: 1,2-Dichloroethane-d4	*48.3*		ug/L	*50.0*		*96.7*	*70-130*			
Surrogate: Toluene-d8	*48.2*		ug/L	*50.0*		*96.4*	*70-130*			
Surrogate: Pentafluorobenzene	*51.3*		ug/L	*50.0*		*103*	*70-130*			

Definitions

mg CaCO3/L	Milligrams Calcium Carbonate per Liter
mg/L:	Milligrams per Liter
R3:	Duplicate RPD is outside of acceptance criteria. The difference between the results is less than 2x Method Reporting Limit.
RL:	Reporting Limit
RPD:	Relative Percent Difference
ug/L:	Micrograms per Liter
Y1:	Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.3°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008 Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:

Melisa L. Montgomery

Quality Assurance Officer

Reported: 01/21/2021 13:34

MICROBAC

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D 1 A 0 9 9 4
W & C - Plymouth

FOR LAB USE ONLY

Lab WO#

Project Manager

Microbac Laboratories, Inc.

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
DELIVERY: ROBERT BLANCHARD
E-MAIL: [redacted]
PHONE: 508-830-4159 FAX: 508-732-0238

BILL TO: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
PURCHASE ORDER #
ATTENTION: ACCOUNTS PAYABLE
PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP
LOCATION: ID 11773
WELLS - QUARTERLY
ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL
ROBERT SCOTT
PHONE: CELL - 860-204-7988
FAX: 508-732-0238

Sample Identification		Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # A11 (250 mL)		1/12/2021	11:46		X	WW	1	X	X											X			
Well # A11 (250 mL)		1/12/2021	11:46		X	WW	1			X	X								X				
Well # A11 (250 mL)(filtered)		1/12/2021	11:46		X	WW	1					X							X				
Well # A11 (250 mL)		1/12/2021	11:46		X	WW	1						X						X				
Well # A11 (250 mL)		1/12/2021	11:46		X	WW	1							X					X				
Well # A11 (250 mL)		1/12/2021	11:46		X	WW	1								X	X	X					X	
Well # A11 (40 mL vial)	A11	1/12/2021	11:46		X	WW	2			PRESERVATIVE VERIFIED Initials								X	X				
Well # A11 (40 mL vial)	A11	1/12/2021	11:46		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER:		
RECEIVED:		
RELINQUISHED:		13:4
RECEIVED:	1-12-2021	1311
RELINQUISHED:	1-12-2021	1603
RECEIVED:	1-12-21	1605

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE):

COOLED ☐ AMBIENT ☐ COMPLIANT ☐

3.3°C

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A1281

Project Description

Wells- Quarterly

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Friday, January 22, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A1281

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells- Quarterly

Project / PO Number: 346346
Received: 01/14/2021
Reported: 01/22/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well 6D	D1A1281-01	Groundwater	Grab		01/14/21 09:20	01/14/21 17:35
Well 6D	D1A1281-02	Groundwater	Grab		01/14/21 09:20	01/14/21 17:35
Well 6D (filtered)	D1A1281-03	Groundwater	Grab		01/14/21 09:20	01/14/21 17:35
Well 6D	D1A1281-04	Groundwater	Grab		01/14/21 09:20	01/14/21 17:35
Well 6D	D1A1281-05	Groundwater	Grab		01/14/21 09:20	01/14/21 17:35
Well 6D	D1A1281-06	Groundwater	Grab		01/14/21 09:20	01/14/21 17:35
Well 6D	D1A1281-07	Groundwater	Grab		01/14/21 09:20	01/14/21 17:35
Well 6D	D1A1281-08	Groundwater	Grab		01/14/21 09:20	01/14/21 17:35

CERTIFICATE OF ANALYSIS
D1A1281

Analytical Testing Parameters

Client Sample ID: Well 6D
Sample Matrix: Groundwater
Lab Sample ID: D1A1281-01
Collected By: Customer
Collection Date: 01/14/2021 9:20

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 351.1								
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L	1		01/19/21 0941	01/19/21 1656	CLW
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0149**	0.0106	mg/L	1		01/18/21 1619	01/19/21 1022	CLW

Client Sample ID: Well 6D
Sample Matrix: Groundwater
Lab Sample ID: D1A1281-02
Collected By: Customer
Collection Date: 01/14/2021 9:20

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-NO_3^- F-2011								
Nitrate as N	**1.72**	0.0500	mg/L	1			01/14/21 2021	DJM
Nitrite as N	<0.0100	0.0100	mg/L	1	**Y1**		01/14/21 2021	DJM

Client Sample ID: Well 6D (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1A1281-03
Collected By: Customer
Collection Date: 01/14/2021 9:20

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0200**	0.0100	mg/L	1		01/14/21 1753	01/14/21 1922	DJM

Client Sample ID: Well 6D
Sample Matrix: Groundwater
Lab Sample ID: D1A1281-04
Collected By: Customer
Collection Date: 01/14/2021 9:20

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 2320 B-2011								
Alkalinity to pH 4.5	**4.50**	1.00	mg CaCO3/L	1	**A27**		01/16/21 1538	MAD

CERTIFICATE OF ANALYSIS

D1A1281

Client Sample ID: Well 6D
Sample Matrix: Groundwater
Lab Sample ID: D1A1281-05
Collected By: Customer
Collection Date: 01/14/2021 9:20

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-Cl E-2011								
Chloride	**76.1**	2.00	mg/L	1			01/18/21 1638	CLW

Client Sample ID: Well 6D
Sample Matrix: Groundwater
Lab Sample ID: D1A1281-06
Collected By: Customer
Collection Date: 01/14/2021 9:20

Metals Total by ICP	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.7, Rv. 4.4 (1994)								
Boron	**0.0083**	0.0050	mg/L	1	**Y1**	01/18/21 1333	01/20/21 1300	JDF
Copper	**0.0046**	0.0020	mg/L	1		01/18/21 1333	01/19/21 1602	JDF
Sodium	**22.7**	1.00	mg/L	1		01/18/21 1333	01/19/21 1602	JDF

Client Sample ID: Well 6D
Sample Matrix: Groundwater
Lab Sample ID: D1A1281-07
Collected By: Customer
Collection Date: 01/14/2021 9:20

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acrolein	<20.0	20.0	ug/L	1			01/15/21 1349	JAN
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	1			01/15/21 1349	JAN
Surrogate: 1,2-Dichloroethane-d4	99.3	Limit: 70-130	% Rec	1			01/15/21 1349	JAN
Surrogate: Toluene-d8	101	Limit: 70-130	% Rec	1			01/15/21 1349	JAN
Surrogate: Pentafluorobenzene	83.1	Limit: 70-130	% Rec	1			01/15/21 1349	JAN

CERTIFICATE OF ANALYSIS

D1A1281

Client Sample ID:	Well 6D		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A1281-08	**Collection Date:**	01/14/2021 9:20

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acetone	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0108	JAN
Acrylonitrile	<20.0	20.0	ug/L	1			01/21/21 0108	JAN
Benzene	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
Bromodichloromethane	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
Bromoform	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
Bromomethane	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
2-Butanone (MEK)	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0108	JAN
Carbon disulfide	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0108	JAN
Carbon tetrachloride	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
Chlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
Chloroform	<4.00	4.00	ug/L	1			01/21/21 0108	JAN
Chloromethane	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
Dibromochloromethane	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0108	JAN
1,2-Dichlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
1,3-Dichlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
1,4-Dichlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0108	JAN
1,2-Dichloroethane	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
1,1-Dichloroethane	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
cis-1,2-Dichloroethene	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0108	JAN
1,1-Dichloroethene	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
trans-1,2-Dichloroethene	<4.00	4.00	ug/L	1			01/21/21 0108	JAN
1,2-Dichloropropane	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
cis-1,3-Dichloropropene	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
trans-1,3-Dichloropropene	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
Ethylbenzene	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
2-Hexanone (MBK)	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0108	JAN
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0108	JAN
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L	1			01/21/21 0108	JAN
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0108	JAN
Styrene	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0108	JAN
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
Tetrachloroethene	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
Toluene	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
1,1,2-Trichloroethane	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
1,1,1-Trichloroethane	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
Trichloroethene	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
Vinyl chloride	<5.00	5.00	ug/L	1			01/21/21 0108	JAN
m,p-Xylene	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0108	JAN

CERTIFICATE OF ANALYSIS

D1A1281

Client Sample ID:	Well 6D		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A1281-08	**Collection Date:**	01/14/2021 9:20

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
o-Xylene	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0108	JAN
Vinyl acetate	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0108	JAN
Surrogate: 1,2-Dichloroethane-d4	106	Limit: 70-130	% Rec	1			01/21/21 0108	JAN
Surrogate: Toluene-d8	103	Limit: 70-130	% Rec	1			01/21/21 0108	JAN
Surrogate: Pentafluorobenzene	104	Limit: 70-130	% Rec	1			01/21/21 0108	JAN

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DA10785	DA10785-BS1	
		DA10785-BLK1	
		DA10785-MS1	D1A1285-03
		DA10785-DUP1	D1A1285-03
		DA10785-MS2	D1A1288-03
		D1A1281-03	Well 6D (filtered)

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-$NO3^-$ F-2011	DA10796	D1A1281-02	Well 6D
		D1A1281-02	Well 6D
		DA10796-DUP1	D1A1281-02
		DA10796-DUP1	D1A1281-02
		DA10796-MS1	D1A1281-02
		DA10796-MS1	D1A1281-02
		DA10796-MSD1	D1A1281-02
		DA10796-MSD1	D1A1281-02
		DA10796-BS1	
		DA10796-BS2	
		DA10796-BLK1	
		DA10796-BLK1	

Method	Batch	Laboratory ID	Client / Source ID
SM 2320 B-2011	DA10887	DA10887-BLK1	
		DA10887-DUP1	D1A1281-04
		DA10887-BS1	
		D1A1281-04	Well 6D

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DA10891	DA10891-BS1	
		DA10891-BLK1	
		DA10891-MS1	D1A1275-03
		D1A1281-01	Well 6D
		DA10891-MS2	D1A1281-01
		DA10891-DUP1	D1A1275-03

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-Cl E-2011	DA10893	DA10893-BS1	
		DA10893-BLK1	
		DA10893-DUP1	D1A1288-05
		DA10893-MS1	D1A1288-05
		DA10893-MSD1	D1A1288-05

SM 4500-Cl E-2011	DA10893	D1A1281-05	Well 6D

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.7, Rv. 4.4 (1994)	DA10898	DA10898-BLK1	
		DA10898-BS1	
		DA10898-DUP1	D1A1338-01
		DA10898-MS1	D1A1338-01
		D1A1281-06	Well 6D
		D1A1281-06	Well 6D
		DA10898-MS2	D1A1381-02
		DA10898-BLK2	
		DA10898-BS2	
		DA10898-DUP2	D1A1338-01
		DA10898-MS3	D1A1338-01
		D1A1281-06	Well 6D
		DA10898-MS4	D1A1338-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 351.1	DA10975	DA10975-BS1	
		DA10975-BLK1	
		DA10975-DUP1	D1A1275-01
		DA10975-MS1	D1A1275-01
		DA10975-MS2	D1A1275-02
		D1A1281-01	Well 6D

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DA11074	DA11074-BS1	
		DA11074-BLK1	
		D1A1281-07	Well 6D
		DA11074-MS1	D1A1281-07
		DA11074-MSD1	D1A1281-07

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DA11220	DA11220-BS1	
		DA11220-BLK1	
		D1A1281-08	Well 6D
		DA11220-MS1	D1A1229-01
		DA11220-MSD1	D1A1229-01

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10785 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10785-BLK1)	Prepared & Analyzed: 01/14/2021									

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10785 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10785-BLK1)			Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DA10785-BS1)			Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.974	0.0100	mg/L	1.00		97.3	90-110			
Duplicate (DA10785-DUP1)		**Source: D1A1285-03**	Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.0150	0.0100	mg/L		0.0170			12.5	20	
Matrix Spike (DA10785-MS1)		**Source: D1A1285-03**	Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.981	0.0100	mg/L	1.00	0.0170	96.3	90-110			
Matrix Spike (DA10785-MS2)		**Source: D1A1288-03**	Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.997	0.0100	mg/L	1.00	0.0160	98.0	90-110			
Batch DA10796 - Wet Chem - W - SM 4500-NO_3^- F-2011										
Blank (DA10796-BLK1)			Prepared & Analyzed: 01/14/2021							
Nitrite as N	<0.0100	0.0100	mg/L							
Nitrate as N	<0.0500	0.0500	mg/L							
LCS (DA10796-BS1)			Prepared & Analyzed: 01/14/2021							
Nitrate as N	4.83	0.0500	mg/L	5.00		96.6	90-110			
LCS (DA10796-BS2)			Prepared & Analyzed: 01/14/2021							
Nitrite as N	1.01	0.0100	mg/L	1.00		101	90-110			
Duplicate (DA10796-DUP1)		**Source: D1A1281-02**	Prepared & Analyzed: 01/14/2021							
Nitrite as N	<0.0100	0.0100	mg/L		ND				20	
Nitrate as N	1.71	0.0500	mg/L		1.72			0.117	20	
Matrix Spike (DA10796-MS1)		**Source: D1A1281-02**	Prepared & Analyzed: 01/14/2021							
Nitrite as N	1.08	0.0100	mg/L	1.00	ND	108	75-125			
Nitrate as N	6.42	0.0500	mg/L	5.00	1.72	94.1	75-125			
Matrix Spike Dup (DA10796-MSD1)		**Source: D1A1281-02**	Prepared & Analyzed: 01/14/2021							
Nitrite as N	1.06	0.0100	mg/L	1.00	ND	106	75-125	1.43	20	
Nitrate as N	6.40	0.0500	mg/L	5.00	1.72	93.7	75-125	0.307	20	
Batch DA10887 - Wet Chem - W - SM 2320 B-2011										
Blank (DA10887-BLK1)			Prepared & Analyzed: 01/16/2021							
Alkalinity to pH 4.5	<1.00	1.00	mg $CaCO_3$/L							
LCS (DA10887-BS1)			Prepared & Analyzed: 01/16/2021							
Alkalinity to pH 4.5	50.0	1.00	mg $CaCO_3$/L	50.0		100	90-110			
Duplicate (DA10887-DUP1)		**Source: D1A1281-04**	Prepared & Analyzed: 01/16/2021							
Alkalinity to pH 4.5	5.00	1.00	mg $CaCO_3$/L		4.50			10.5	20	

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10891 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10891-BLK1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DA10891-BS1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	1.00	0.0106	mg/L	1.00		100	90-110			
Duplicate (DA10891-DUP1)		**Source: D1A1275-03**	Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	0.0138	0.0106	mg/L		0.0117			16.7	20	
Matrix Spike (DA10891-MS1)		**Source: D1A1275-03**	Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	1.26	0.0106	mg/L	1.25	0.0117	99.7	90-110			
Matrix Spike (DA10891-MS2)		**Source: D1A1281-01**	Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	1.23	0.0106	mg/L	1.25	0.0149	97.0	90-110			
Batch DA10893 - Wet Chem - W - SM 4500-Cl E-2011										
Blank (DA10893-BLK1)			Prepared & Analyzed: 01/18/2021							
Chloride	<2.00	2.00	mg/L							
LCS (DA10893-BS1)			Prepared & Analyzed: 01/18/2021							
Chloride	19.5	2.00	mg/L	20.0		97.4	90-110			
Duplicate (DA10893-DUP1)		**Source: D1A1288-05**	Prepared & Analyzed: 01/18/2021							
Chloride	13.8	2.00	mg/L		13.8			0.0153	20	
Matrix Spike (DA10893-MS1)		**Source: D1A1288-05**	Prepared & Analyzed: 01/18/2021							
Chloride	34.2	2.00	mg/L	20.0	13.8	102	75-125			
Matrix Spike Dup (DA10893-MSD1)		**Source: D1A1288-05**	Prepared & Analyzed: 01/18/2021							
Chloride	34.6	2.00	mg/L	20.0	13.8	104	75-125	0.964	20	
Batch DA10975 - Wet-Digestion-W - EPA 351.1										
Blank (DA10975-BLK1)			Prepared & Analyzed: 01/19/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L							
LCS (DA10975-BS1)			Prepared & Analyzed: 01/19/2021							
Total Kjeldahl Nitrogen (TKN)	4.98	0.200	mg/L	5.00		99.5	90-110			
Duplicate (DA10975-DUP1)		**Source: D1A1275-01**	Prepared & Analyzed: 01/19/2021							
Total Kjeldahl Nitrogen (TKN)	0.256	0.200	mg/L		0.314			20.3	20	R3
Matrix Spike (DA10975-MS1)		**Source: D1A1275-01**	Prepared & Analyzed: 01/19/2021							
Total Kjeldahl Nitrogen (TKN)	10.0	0.200	mg/L	10.0	0.314	97.3	90-110			
Matrix Spike (DA10975-MS2)		**Source: D1A1275-02**	Prepared & Analyzed: 01/19/2021							
Total Kjeldahl Nitrogen (TKN)	10.5	0.200	mg/L	10.0	0.387	101	90-110			

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10898 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DA10898-BLK1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	<0.0020	0.0020	mg/L							
Sodium	<1.00	1.00	mg/L							

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10898 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DA10898-BLK2)			Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	<0.0050	0.0050	mg/L							
LCS (DA10898-BS1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.533	0.0020	mg/L	0.500		107	85-115			
Sodium	10.3	1.00	mg/L	10.5		97.9	85-115			
LCS (DA10898-BS2)			Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.523	0.0050	mg/L	0.500		105	85-115			
Duplicate (DA10898-DUP1)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.0045	0.0020	mg/L		0.0042			6.88	20	
Sodium	39.5	1.00	mg/L		39.1			0.946	20	
Duplicate (DA10898-DUP2)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.0660	0.0050	mg/L		0.0653			1.04	20	
Matrix Spike (DA10898-MS1)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.532	0.0020	mg/L	0.500	0.0042	106	70-130			
Sodium	50.0	1.00	mg/L	10.5	39.1	104	70-130			
Matrix Spike (DA10898-MS2)	**Source: D1A1381-02**		Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.549	0.0020	mg/L	0.500	0.0155	107	70-130			
Sodium	216	1.00	mg/L	10.5	207	79.1	70-130			
Matrix Spike (DA10898-MS3)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.576	0.0050	mg/L	0.500	0.0653	102	70-130			
Matrix Spike (DA10898-MS4)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.619	0.0050	mg/L	0.500	0.0653	111	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11074 - 624.1 - EPA 624.1										
Blank (DA11074-BLK1)			Prepared & Analyzed: 01/15/2021							
Acrolein	<20.0	20.0	ug/L							
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*49.4*		ug/L	*50.0*		*98.8*	*70-130*			
Surrogate: Toluene-d8	*50.0*		ug/L	*50.0*		*100*	*70-130*			
Surrogate: Pentafluorobenzene	*42.3*		ug/L	*50.0*		*84.6*	*70-130*			
LCS (DA11074-BS1)			Prepared & Analyzed: 01/15/2021							
Acrolein	34.1	20.0	ug/L	50.0		68.2	60-140			
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0		21.6	1-305			
Surrogate: 1,2-Dichloroethane-d4	*49.3*		ug/L	*50.0*		*98.6*	*70-130*			
Surrogate: Toluene-d8	*50.8*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Pentafluorobenzene	*42.5*		ug/L	*50.0*		*84.9*	*70-130*			
Matrix Spike (DA11074-MS1)	**Source: D1A1281-07**		Prepared & Analyzed: 01/15/2021							
Acrolein	30.3	20.0	ug/L	50.0	ND	60.7	40-160			
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0	ND	19.9	1-305			
Surrogate: 1,2-Dichloroethane-d4	*48.7*		ug/L	*50.0*		*97.4*	*70-130*			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11074 - 624.1 - EPA 624.1										
Matrix Spike (DA11074-MS1)	**Source: D1A1281-07**		Prepared & Analyzed: 01/15/2021							
Surrogate: Toluene-d8	*50.5*		ug/L	*50.0*		*101*	*70-130*			
Surrogate: Pentafluorobenzene	*43.9*		ug/L	*50.0*		*87.7*	*70-130*			
Matrix Spike Dup (DA11074-MSD1)	**Source: D1A1281-07**		Prepared & Analyzed: 01/15/2021							
Acrolein	31.2	20.0	ug/L	50.0	ND	62.3	40-160	2.63	60	
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0	ND	20.5	1-305	2.97	71	
Surrogate: 1,2-Dichloroethane-d4	*50.0*		ug/L	*50.0*		*100*	*70-130*			
Surrogate: Toluene-d8	*50.9*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Pentafluorobenzene	*42.9*		ug/L	*50.0*		*85.8*	*70-130*			
Batch DA11220 - 624.1 - EPA 624.1										
Blank (DA11220-BLK1)			Prepared & Analyzed: 01/20/2021							
Acetone	<10.0	10.0	ug/L							
Acrylonitrile	<20.0	20.0	ug/L							
Benzene	<5.00	5.00	ug/L							
Bromodichloromethane	<5.00	5.00	ug/L							
Bromoform	<5.00	5.00	ug/L							
Bromomethane	<5.00	5.00	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Carbon disulfide	<5.00	5.00	ug/L							
Carbon tetrachloride	<5.00	5.00	ug/L							
Chlorobenzene	<5.00	5.00	ug/L							
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L							
Chloroform	<4.00	4.00	ug/L							
Chloromethane	<5.00	5.00	ug/L							
Dibromochloromethane	<5.00	5.00	ug/L							
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L							
1,2-Dichlorobenzene	<5.00	5.00	ug/L							
1,3-Dichlorobenzene	<5.00	5.00	ug/L							
1,4-Dichlorobenzene	<5.00	5.00	ug/L							
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L							
1,2-Dichloroethane	<5.00	5.00	ug/L							
1,1-Dichloroethane	<5.00	5.00	ug/L							
cis-1,2-Dichloroethene	<5.00	5.00	ug/L							
1,1-Dichloroethene	<5.00	5.00	ug/L							
trans-1,2-Dichloroethene	<4.00	4.00	ug/L							
1,2-Dichloropropane	<5.00	5.00	ug/L							
cis-1,3-Dichloropropene	<5.00	5.00	ug/L							
trans-1,3-Dichloropropene	<5.00	5.00	ug/L							
Ethylbenzene	<5.00	5.00	ug/L							
2-Hexanone (MBK)	<10.0	10.0	ug/L							
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
Blank (DA11220-BLK1)			Prepared & Analyzed: 01/20/2021							
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L							
Styrene	<5.00	5.00	ug/L							
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L							
Tetrachloroethene	<5.00	5.00	ug/L							
Toluene	<5.00	5.00	ug/L							
1,1,2-Trichloroethane	<5.00	5.00	ug/L							
1,1,1-Trichloroethane	<5.00	5.00	ug/L							
Trichloroethene	<5.00	5.00	ug/L							
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L							
Vinyl chloride	<5.00	5.00	ug/L							
m,p-Xylene	<10.0	10.0	ug/L							
o-Xylene	<5.00	5.00	ug/L							
Vinyl acetate	<5.00	5.00	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*52.5*		ug/L	*50.0*		*105*	*70-130*			
Surrogate: Toluene-d8	*51.7*		ug/L	*50.0*		*103*	*70-130*			
LCS (DA11220-BS1)			Prepared & Analyzed: 01/20/2021							
Acetone	31.9	10.0	ug/L	50.0		63.8	42.1-136			
Acrylonitrile	42.2	20.0	ug/L	50.0		84.4	60-140			
Benzene	46.1	5.00	ug/L	50.0		92.3	65-135			
Bromodichloromethane	44.8	5.00	ug/L	50.0		89.6	65-135			
Bromoform	47.3	5.00	ug/L	50.0		94.6	70-130			
Bromomethane	42.6	5.00	ug/L	50.0		85.1	15-185			
2-Butanone (MEK)	35.5	10.0	ug/L	50.0		71.0	63.1-143			
Carbon disulfide	42.6	5.00	ug/L	50.0		85.2	63.5-124			
Carbon tetrachloride	46.9	5.00	ug/L	50.0		93.7	70-130			
Chlorobenzene	47.3	5.00	ug/L	50.0		94.6	65-135			
Chloroethane (Ethyl chloride)	37.2	5.00	ug/L	50.0		74.5	40-160			
Chloroform	47.8	4.00	ug/L	50.0		95.6	70-135			
Chloromethane	44.1	5.00	ug/L	50.0		88.2	1-205			
Dibromochloromethane	47.6	5.00	ug/L	50.0		95.2	70-135			
Dibromomethane (Methylene bromide)	47.7	5.00	ug/L	50.0		95.4	73.8-124			
1,2-Dichlorobenzene	44.5	5.00	ug/L	50.0		89.0	65-135			
1,3-Dichlorobenzene	44.5	5.00	ug/L	50.0		88.9	70-130			
1,4-Dichlorobenzene	43.8	5.00	ug/L	50.0		87.5	65-135			
Dichlorodifluoromethane (Freon-12)	41.9	5.00	ug/L	50.0		83.8	34.7-129			
1,2-Dichloroethane	48.4	5.00	ug/L	50.0		96.9	70-130			
1,1-Dichloroethane	44.6	5.00	ug/L	50.0		89.1	70-130			
cis-1,2-Dichloroethene	44.4	5.00	ug/L	50.0		88.8	75.5-125			
1,1-Dichloroethene	42.3	5.00	ug/L	50.0		84.6	50-150			
trans-1,2-Dichloroethene	49.3	4.00	ug/L	50.0		98.5	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
LCS (DA11220-BS1)				Prepared & Analyzed: 01/20/2021						
1,2-Dichloropropane	45.6	5.00	ug/L	50.0		91.2	35-165			
cis-1,3-Dichloropropene	49.3	5.00	ug/L	50.0		98.6	25-175			
trans-1,3-Dichloropropene	46.0	5.00	ug/L	50.0		91.9	50-150			
Ethylbenzene	45.7	5.00	ug/L	50.0		91.5	60-140			
2-Hexanone (MBK)	39.7	10.0	ug/L	50.0		79.4	73.6-130			
Methyl tert-butyl ether (MTBE)	42.9	5.00	ug/L	50.0		85.7	69-151			
Methylene chloride (Dichloromethane)	47.5	1.00	ug/L	50.0		95.0	60-140			
4-Methyl-2-pentanone (MIBK)	38.8	10.0	ug/L	50.0		77.7	72.5-129			
Styrene	49.9	5.00	ug/L	50.0		99.8	79.2-127			
1,1,2,2-Tetrachloroethane	50.5	5.00	ug/L	50.0		101	60-140			
Tetrachloroethene	46.2	5.00	ug/L	50.0		92.5	70-130			
Toluene	45.7	5.00	ug/L	50.0		91.5	70-130			
1,1,2-Trichloroethane	45.7	5.00	ug/L	50.0		91.4	70-130			
1,1,1-Trichloroethane	47.3	5.00	ug/L	50.0		94.6	70-130			
Trichloroethene	48.2	5.00	ug/L	50.0		96.4	65-135			
Trichlorofluoromethane (Freon 11)	35.8	5.00	ug/L	50.0		71.6	50-150			
Vinyl chloride	44.6	5.00	ug/L	50.0		89.2	5-195			
m,p-Xylene	98.6	10.0	ug/L	100		98.6	77.1-129			
o-Xylene	47.1	5.00	ug/L	50.0		94.3	78.8-126			
Vinyl acetate	42.5	5.00	ug/L	50.0		85.1	60-140			
Surrogate: 1,2-Dichloroethane-d4	*47.6*		ug/L	*50.0*		*95.2*	*70-130*			
Surrogate: Toluene-d8	*49.8*		ug/L	*50.0*		*99.6*	*70-130*			
Surrogate: Pentafluorobenzene	*51.6*		ug/L	*50.0*		*103*	*70-130*			
Matrix Spike (DA11220-MS1)	**Source: D1A1229-01**			Prepared & Analyzed: 01/21/2021						
Acetone	32.1	10.0	ug/L	50.0	ND	64.2	0-200			
Acrylonitrile	43.2	20.0	ug/L	50.0	ND	86.4	40-160			
Benzene	51.1	5.00	ug/L	50.0	ND	102	37-151			
Bromodichloromethane	47.7	5.00	ug/L	50.0	ND	95.4	35-155			
Bromoform	45.5	5.00	ug/L	50.0	ND	91.0	45-169			
Bromomethane	47.8	5.00	ug/L	50.0	ND	95.6	1-242			
2-Butanone (MEK)	37.3	10.0	ug/L	50.0	ND	74.6	0-200			
Carbon disulfide	46.0	5.00	ug/L	50.0	ND	92.0	0-200			
Carbon tetrachloride	54.5	5.00	ug/L	50.0	ND	109	70-140			
Chlorobenzene	49.6	5.00	ug/L	50.0	ND	99.3	37-160			
Chloroethane (Ethyl chloride)	41.4	5.00	ug/L	50.0	ND	82.8	14-230			
Chloroform	51.4	4.00	ug/L	50.0	ND	103	51-138			
Chloromethane	54.1	5.00	ug/L	50.0	ND	108	1-273			
Dibromochloromethane	46.8	5.00	ug/L	50.0	ND	93.7	53-149			
Dibromomethane (Methylene bromide)	48.5	5.00	ug/L	50.0	ND	96.9	0-200			
1,2-Dichlorobenzene	44.3	5.00	ug/L	50.0	ND	88.7	18-190			
1,3-Dichlorobenzene	44.7	5.00	ug/L	50.0	ND	89.3	59-156			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
Matrix Spike (DA11220-MS1)	**Source: D1A1229-01**		Prepared & Analyzed: 01/21/2021							
1,4-Dichlorobenzene	42.2	5.00	ug/L	50.0	ND	84.4	18-190			
Dichlorodifluoromethane (Freon-12)	51.1	5.00	ug/L	50.0	ND	102	0-200			
1,2-Dichloroethane	50.3	5.00	ug/L	50.0	ND	101	49-155			
1,1-Dichloroethane	49.3	5.00	ug/L	50.0	ND	98.5	59-155			
cis-1,2-Dichloroethene	47.2	5.00	ug/L	50.0	ND	94.4	0-200			
1,1-Dichloroethene	47.8	5.00	ug/L	50.0	ND	95.6	1-234			
trans-1,2-Dichloroethene	53.0	4.00	ug/L	50.0	ND	106	54-156			
1,2-Dichloropropane	48.0	5.00	ug/L	50.0	ND	95.9	1-210			
cis-1,3-Dichloropropene	47.6	5.00	ug/L	50.0	ND	95.1	1-227			
trans-1,3-Dichloropropene	45.1	5.00	ug/L	50.0	ND	90.2	17-183			
Ethylbenzene	49.3	5.00	ug/L	50.0	ND	98.6	37-162			
2-Hexanone (MBK)	38.1	10.0	ug/L	50.0	ND	76.1	0-200			
Methyl tert-butyl ether (MTBE)	42.2	5.00	ug/L	50.0	ND	84.4	0-200			
Methylene chloride (Dichloromethane)	50.5	1.00	ug/L	50.0	ND	101	1-221			
4-Methyl-2-pentanone (MIBK)	38.3	10.0	ug/L	50.0	ND	76.5	0-200			
Styrene	52.3	5.00	ug/L	50.0	ND	105	0-200			
1,1,2,2-Tetrachloroethane	55.4	5.00	ug/L	50.0	ND	111	46-157			
Tetrachloroethene	49.1	5.00	ug/L	50.0	ND	98.2	64-148			
Toluene	49.1	5.00	ug/L	50.0	ND	98.2	47-150			
1,1,2-Trichloroethane	46.1	5.00	ug/L	50.0	ND	92.2	52-150			
1,1,1-Trichloroethane	53.6	5.00	ug/L	50.0	ND	107	52-162			
Trichloroethene	49.4	5.00	ug/L	50.0	ND	98.7	70-157			
Trichlorofluoromethane (Freon 11)	41.2	5.00	ug/L	50.0	ND	82.3	17-181			
Vinyl chloride	50.9	5.00	ug/L	50.0	ND	102	1-251			
m,p-Xylene	106	10.0	ug/L	100	ND	106	0-200			
o-Xylene	49.7	5.00	ug/L	50.0	ND	99.4	0-200			
Vinyl acetate	56.2	5.00	ug/L	50.0	ND	112	60-140			
Surrogate: 1,2-Dichloroethane-d4	*48.4*		ug/L	*50.0*		*96.8*	*70-130*			
Surrogate: Toluene-d8	*48.5*		ug/L	*50.0*		*96.9*	*70-130*			
Surrogate: Pentafluorobenzene	*53.2*		ug/L	*50.0*		*106*	*70-130*			
Matrix Spike Dup (DA11220-MSD1)	**Source: D1A1229-01**		Prepared & Analyzed: 01/21/2021							
Acetone	32.3	10.0	ug/L	50.0	ND	64.7	0-200	0.652	200	
Acrylonitrile	41.1	20.0	ug/L	50.0	ND	82.2	40-160	5.03	60	
Benzene	48.5	5.00	ug/L	50.0	ND	97.0	37-151	5.10	61	
Bromodichloromethane	45.0	5.00	ug/L	50.0	ND	90.0	35-155	5.83	56	
Bromoform	43.5	5.00	ug/L	50.0	ND	86.9	45-169	4.61	42	
Bromomethane	46.9	5.00	ug/L	50.0	ND	93.8	1-242	1.84	61	
2-Butanone (MEK)	38.6	10.0	ug/L	50.0	ND	77.2	0-200	3.32	200	
Carbon disulfide	43.3	5.00	ug/L	50.0	ND	86.6	0-200	6.05	200	
Carbon tetrachloride	49.9	5.00	ug/L	50.0	ND	99.8	70-140	8.72	41	
Chlorobenzene	45.8	5.00	ug/L	50.0	ND	91.5	37-160	8.11	53	
Chloroethane (Ethyl chloride)	37.9	5.00	ug/L	50.0	ND	75.7	14-230	8.96	78	

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
Matrix Spike Dup (DA11220-MSD1)	**Source: D1A1229-01**		Prepared & Analyzed: 01/21/2021							
Chloroform	48.9	4.00	ug/L	50.0	ND	97.8	51-138	5.00	54	
Chloromethane	51.6	5.00	ug/L	50.0	ND	103	1-273	4.84	60	
Dibromochloromethane	44.9	5.00	ug/L	50.0	ND	89.8	53-149	4.21	50	
Dibromomethane (Methylene bromide)	47.2	5.00	ug/L	50.0	ND	94.5	0-200	2.59	200	
1,2-Dichlorobenzene	41.5	5.00	ug/L	50.0	ND	83.0	18-190	6.57	57	
1,3-Dichlorobenzene	42.1	5.00	ug/L	50.0	ND	84.2	59-156	5.88	43	
1,4-Dichlorobenzene	40.8	5.00	ug/L	50.0	ND	81.7	18-190	3.23	57	
Dichlorodifluoromethane (Freon-12)	49.4	5.00	ug/L	50.0	ND	98.7	0-200	3.39	200	
1,2-Dichloroethane	49.3	5.00	ug/L	50.0	ND	98.5	49-155	2.09	49	
1,1-Dichloroethane	45.1	5.00	ug/L	50.0	ND	90.2	59-155	8.84	40	
cis-1,2-Dichloroethene	43.8	5.00	ug/L	50.0	ND	87.5	0-200	7.52	200	
1,1-Dichloroethene	45.1	5.00	ug/L	50.0	ND	90.2	1-234	5.83	32	
trans-1,2-Dichloroethene	49.0	4.00	ug/L	50.0	ND	98.1	54-156	7.78	45	
1,2-Dichloropropane	46.4	5.00	ug/L	50.0	ND	92.7	1-210	3.44	55	
cis-1,3-Dichloropropene	45.2	5.00	ug/L	50.0	ND	90.4	1-227	5.11	58	
trans-1,3-Dichloropropene	42.9	5.00	ug/L	50.0	ND	85.8	17-183	5.02	86	
Ethylbenzene	45.2	5.00	ug/L	50.0	ND	90.5	37-162	8.61	63	
2-Hexanone (MBK)	37.1	10.0	ug/L	50.0	ND	74.3	0-200	2.45	200	
Methyl tert-butyl ether (MTBE)	41.5	5.00	ug/L	50.0	ND	83.0	0-200	1.74	200	
Methylene chloride (Dichloromethane)	47.4	1.00	ug/L	50.0	ND	94.7	1-221	6.50	28	
4-Methyl-2-pentanone (MIBK)	36.0	10.0	ug/L	50.0	ND	71.9	0-200	6.23	200	
Styrene	48.5	5.00	ug/L	50.0	ND	96.9	0-200	7.58	200	
1,1,2,2-Tetrachloroethane	52.1	5.00	ug/L	50.0	ND	104	46-157	6.25	61	
Tetrachloroethene	45.8	5.00	ug/L	50.0	ND	91.7	64-148	6.85	39	
Toluene	44.8	5.00	ug/L	50.0	ND	89.6	47-150	9.18	41	
1,1,2-Trichloroethane	42.8	5.00	ug/L	50.0	ND	85.5	52-150	7.56	45	
1,1,1-Trichloroethane	51.1	5.00	ug/L	50.0	ND	102	52-162	4.93	36	
Trichloroethene	45.8	5.00	ug/L	50.0	ND	91.5	70-157	7.59	48	
Trichlorofluoromethane (Freon 11)	38.7	5.00	ug/L	50.0	ND	77.4	17-181	6.11	84	
Vinyl chloride	47.7	5.00	ug/L	50.0	ND	95.3	1-251	6.65	66	
m,p-Xylene	97.1	10.0	ug/L	100	ND	97.1	0-200	8.40	200	
o-Xylene	46.4	5.00	ug/L	50.0	ND	92.9	0-200	6.78	200	
Vinyl acetate	55.1	5.00	ug/L	50.0	ND	110	60-140	2.08	25	
Surrogate: 1,2-Dichloroethane-d4	*49.6*		ug/L	*50.0*		*99.2*	*70-130*			
Surrogate: Toluene-d8	*48.7*		ug/L	*50.0*		*97.4*	*70-130*			
Surrogate: Pentafluorobenzene	*52.2*		ug/L	*50.0*		*104*	*70-130*			

MICROBAC®

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A1281

Definitions

A27:	Headspace was present in the bottle used for the alkalinity analysis.
MCL:	US EPA Maximum Contaminant Level
mg CaCO3/L	Milligrams Calcium Carbonate per Liter
mg/L:	Milligrams per Liter
R3:	Duplicate RPD is outside of acceptance criteria. The difference between the results is less than 2x Method Reporting Limit.
RL:	Reporting Limit
RPD:	Relative Percent Difference
ug/L:	Micrograms per Liter
Y1:	Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.3°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008 Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:

M Montgomery

Melisa L. Montgomery
Quality Assurance Officer
Reported: 01/22/2021 16:01

MICROBAC

CH
61 Louis
Tel: (8(

D 1 A 1 2 8 1
W & C - Plymouth

FOR LAB USE ONLY
Lab WO#
Project Manager

Microbac Laboratories, Inc.

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
DELIVERY: ROBERT SCOTT
E-MAIL: RSCOTT@WOODARDCURRAN.COM
PHONE: 508-830-4159 FAX: 508-732-0238

BILL TO: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DR.
PLYMOUTH, Ma
PURCHASE ORDER #
ATTENTION: ACCOUNTS PAYABLE
PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP
LOCATION: ID 11773
WELLS - QUARTERLY
ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL
ROBERT SCOTT
PHONE: CELL - 860-204-7988
FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	Analysis: TOTAL PHOS.	Analysis: NITRITE	Analysis: NITRATE	Analysis: ORTHO-PHOSPHATE	Analysis: ALKALINITY	Analysis: CHLORIDE	Analysis: COPPER	Analysis: BORON	Analysis: SODIUM	Analysis: EPA 624	Preservatives: NON-PRES	Preservatives: HS2O4	Preservatives: HCL	Preservatives: HNO3	Preservatives: OTHER
GD																						
Well # (250 mL) GD	1/14/21	920		X	WW	1	X	X											X			
Well # (500 mL) GD				X	WW	x			X	X		x						X				
Well # (250 mL)(filtered) GD				X	WW	1					X							X				
Well # (250 mL) GD				X	WW	1												X				
Well # (500 mL) GD				X	WW	1							X					X				
Well # (250 mL) GD				X	WW	1			PRESERVATIVE VERIFIED					X	X	X					X	
Well # (40 mL vial) GD				X	WW	2											X	X				
Well # (40 mL vial) GD	1/14/21	920		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER: SW	1/14/20	
RECEIVED:	1/14/21	
RELINQUISHED:	1/14/20	1350
CEIVED:	1.14.2021	1350
LINQUISHED:	1.14.2021	1735
CEIVED:	1-14-21	1735

TURN AROUND (INDICATE IN CALENDAR DAYS):
FAX ☐ HARD COPY ☐ E-MAIL ☐
EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE
COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE):
COOLED ☐ AMBIENT ☐ COMPLIANT ☐
3.3 °C

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A1282

Project Description

Wells - Quarterly

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630



Quality Assurance Officer

Melisa L. Montgomery

Friday, January 22, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

MICROBAC®

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A1282

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Quarterly

Project / PO Number: 346346
Received: 01/14/2021
Reported: 01/22/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well 475	D1A1282-01	Groundwater	Grab		01/14/21 10:32	01/14/21 17:35
Well 475	D1A1282-02	Groundwater	Grab		01/14/21 10:32	01/14/21 17:35
Well 475 (filtered)	D1A1282-03	Groundwater	Grab		01/14/21 10:32	01/14/21 17:35
Well 475	D1A1282-04	Groundwater	Grab		01/14/21 10:32	01/14/21 17:35
Well 475	D1A1282-05	Groundwater	Grab		01/14/21 10:32	01/14/21 17:35
Well 475	D1A1282-06	Groundwater	Grab		01/14/21 10:32	01/14/21 17:35
Well 475	D1A1282-07	Groundwater	Grab		01/14/21 10:32	01/14/21 17:35
Well 475	D1A1282-08	Groundwater	Grab		01/14/21 10:32	01/14/21 17:35

CERTIFICATE OF ANALYSIS

D1A1282

Analytical Testing Parameters

Client Sample ID: Well 475
Sample Matrix: Groundwater
Lab Sample ID: D1A1282-01
Collected By: Customer
Collection Date: 01/14/2021 10:32

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 351.1								
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L	1		01/19/21 0941	01/19/21 1657	CLW
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0149**	0.0106	mg/L	1		01/18/21 1619	01/19/21 1037	CLW

Client Sample ID: Well 475
Sample Matrix: Groundwater
Lab Sample ID: D1A1282-02
Collected By: Customer
Collection Date: 01/14/2021 10:32

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-NO_3^- F-2011								
Nitrate as N	**1.91**	0.0500	mg/L	1			01/14/21 2029	DJM
Nitrite as N	<0.0100	0.0100	mg/L	1	**Y1**		01/14/21 2029	DJM

Client Sample ID: Well 475 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1A1282-03
Collected By: Customer
Collection Date: 01/14/2021 10:32

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0230**	0.0100	mg/L	1		01/14/21 1753	01/14/21 1925	DJM

Client Sample ID: Well 475
Sample Matrix: Groundwater
Lab Sample ID: D1A1282-04
Collected By: Customer
Collection Date: 01/14/2021 10:32

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 2320 B-2011								
Alkalinity to pH 4.5	**3.00**	1.00	mg CaCO3/L	1			01/16/21 1538	MAD

CERTIFICATE OF ANALYSIS

D1A1282

Client Sample ID:	Well 475		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A1282-05	**Collection Date:**	01/14/2021 10:32

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-Cl E-2011								
Chloride	**90.5**	4.00	mg/L	2			01/18/21 1639	CLW

Client Sample ID:	Well 475		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A1282-06	**Collection Date:**	01/14/2021 10:32

Metals Total by ICP	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.7, Rv. 4.4 (1994)								
Boron	**0.0185**	0.0050	mg/L	1	**Y1**	01/18/21 1333	01/20/21 1303	JDF
Copper	<0.0020	0.0020	mg/L	1		01/18/21 1333	01/19/21 1605	JDF
Sodium	**40.2**	1.00	mg/L	1		01/18/21 1333	01/19/21 1605	JDF

Client Sample ID:	Well 475		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A1282-07	**Collection Date:**	01/14/2021 10:32

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acrolein	<20.0	20.0	ug/L	1			01/15/21 1414	JAN
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	1			01/15/21 1414	JAN
Surrogate: 1,2-Dichloroethane-d4	97.7	Limit: 70-130	% Rec	1			01/15/21 1414	JAN
Surrogate: Toluene-d8	102	Limit: 70-130	% Rec	1			01/15/21 1414	JAN
Surrogate: Pentafluorobenzene	83.7	Limit: 70-130	% Rec	1			01/15/21 1414	JAN

CERTIFICATE OF ANALYSIS

D1A1282

Client Sample ID:	Well 475		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A1282-08	**Collection Date:**	01/14/2021 10:32

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acetone	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0133	JAN
Acrylonitrile	<20.0	20.0	ug/L	1			01/21/21 0133	JAN
Benzene	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
Bromodichloromethane	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
Bromoform	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
Bromomethane	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
2-Butanone (MEK)	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0133	JAN
Carbon disulfide	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0133	JAN
Carbon tetrachloride	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
Chlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
Chloroform	<4.00	4.00	ug/L	1			01/21/21 0133	JAN
Chloromethane	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
Dibromochloromethane	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0133	JAN
1,2-Dichlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
1,3-Dichlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
1,4-Dichlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0133	JAN
1,2-Dichloroethane	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
1,1-Dichloroethane	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
cis-1,2-Dichloroethene	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0133	JAN
1,1-Dichloroethene	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
trans-1,2-Dichloroethene	<4.00	4.00	ug/L	1			01/21/21 0133	JAN
1,2-Dichloropropane	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
cis-1,3-Dichloropropene	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
trans-1,3-Dichloropropene	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
Ethylbenzene	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
2-Hexanone (MBK)	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0133	JAN
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0133	JAN
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L	1			01/21/21 0133	JAN
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0133	JAN
Styrene	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0133	JAN
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
Tetrachloroethene	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
Toluene	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
1,1,2-Trichloroethane	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
1,1,1-Trichloroethane	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
Trichloroethene	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
Vinyl chloride	<5.00	5.00	ug/L	1			01/21/21 0133	JAN
m,p-Xylene	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0133	JAN

CERTIFICATE OF ANALYSIS

D1A1282

Client Sample ID:	Well 475		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A1282-08	**Collection Date:**	01/14/2021 10:32

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
o-Xylene	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0133	JAN
Vinyl acetate	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0133	JAN
Surrogate: 1,2-Dichloroethane-d4	105	Limit: 70-130	% Rec	1			01/21/21 0133	JAN
Surrogate: Toluene-d8	103	Limit: 70-130	% Rec	1			01/21/21 0133	JAN
Surrogate: Pentafluorobenzene	106	Limit: 70-130	% Rec	1			01/21/21 0133	JAN

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DA10785	DA10785-BS1	
		DA10785-BLK1	
		DA10785-MS1	D1A1285-03
		DA10785-DUP1	D1A1285-03
		DA10785-MS2	D1A1288-03
		D1A1282-03	Well 475 (filtered)

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-$NO3^{-}$ F-2011	DA10796	DA10796-DUP1	D1A1281-02
		DA10796-DUP1	D1A1281-02
		DA10796-MS1	D1A1281-02
		DA10796-MS1	D1A1281-02
		DA10796-MSD1	D1A1281-02
		DA10796-MSD1	D1A1281-02
		D1A1282-02	Well 475
		D1A1282-02	Well 475
		DA10796-BS1	
		DA10796-BS2	
		DA10796-BLK1	
		DA10796-BLK1	

Method	Batch	Laboratory ID	Client / Source ID
SM 2320 B-2011	DA10887	DA10887-BLK1	
		DA10887-DUP1	D1A1281-04
		DA10887-BS1	
		D1A1282-04	Well 475

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DA10891	DA10891-BS1	
		DA10891-BLK1	
		DA10891-MS1	D1A1275-03
		DA10891-MS2	D1A1281-01
		D1A1282-01	Well 475
		DA10891-DUP1	D1A1275-03

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-Cl E-2011	DA10893	DA10893-BS1	
		DA10893-BLK1	
		DA10893-DUP1	D1A1288-05
		DA10893-MS1	D1A1288-05
		DA10893-MSD1	D1A1288-05

SM 4500-Cl E-2011	DA10893	D1A1282-05	Well 475

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.7, Rv. 4.4 (1994)	DA10898	DA10898-BLK1	
		DA10898-BS1	
		DA10898-DUP1	D1A1338-01
		DA10898-MS1	D1A1338-01
		D1A1282-06	Well 475
		D1A1282-06	Well 475
		DA10898-MS2	D1A1381-02
		DA10898-BLK2	
		DA10898-BS2	
		DA10898-DUP2	D1A1338-01
		DA10898-MS3	D1A1338-01
		D1A1282-06	Well 475
		DA10898-MS4	D1A1338-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 351.1	DA10975	DA10975-BS1	
		DA10975-BLK1	
		DA10975-DUP1	D1A1275-01
		DA10975-MS1	D1A1275-01
		DA10975-MS2	D1A1275-02
		D1A1282-01	Well 475

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DA11074	DA11074-BS1	
		DA11074-BLK1	
		D1A1282-07	Well 475
		DA11074-MS1	D1A1281-07
		DA11074-MSD1	D1A1281-07

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DA11220	DA11220-BS1	
		DA11220-BLK1	
		D1A1282-08	Well 475
		DA11220-MS1	D1A1229-01
		DA11220-MSD1	D1A1229-01

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10785 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10785-BLK1)	Prepared & Analyzed: 01/14/2021									

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10785 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10785-BLK1)			Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DA10785-BS1)			Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.974	0.0100	mg/L	1.00		97.3	90-110			
Duplicate (DA10785-DUP1)		**Source: D1A1285-03**	Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.0150	0.0100	mg/L		0.0170			12.5	20	
Matrix Spike (DA10785-MS1)		**Source: D1A1285-03**	Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.981	0.0100	mg/L	1.00	0.0170	96.3	90-110			
Matrix Spike (DA10785-MS2)		**Source: D1A1288-03**	Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.997	0.0100	mg/L	1.00	0.0160	98.0	90-110			
Batch DA10796 - Wet Chem - W - SM 4500-NO_3^- F-2011										
Blank (DA10796-BLK1)			Prepared & Analyzed: 01/14/2021							
Nitrite as N	<0.0100	0.0100	mg/L							
Nitrate as N	<0.0500	0.0500	mg/L							
LCS (DA10796-BS1)			Prepared & Analyzed: 01/14/2021							
Nitrate as N	4.83	0.0500	mg/L	5.00		96.6	90-110			
LCS (DA10796-BS2)			Prepared & Analyzed: 01/14/2021							
Nitrite as N	1.01	0.0100	mg/L	1.00		101	90-110			
Duplicate (DA10796-DUP1)		**Source: D1A1281-02**	Prepared & Analyzed: 01/14/2021							
Nitrite as N	<0.0100	0.0100	mg/L		ND				20	
Nitrate as N	1.71	0.0500	mg/L		1.72			0.117	20	
Matrix Spike (DA10796-MS1)		**Source: D1A1281-02**	Prepared & Analyzed: 01/14/2021							
Nitrite as N	1.08	0.0100	mg/L	1.00	ND	108	75-125			
Nitrate as N	6.42	0.0500	mg/L	5.00	1.72	94.1	75-125			
Matrix Spike Dup (DA10796-MSD1)		**Source: D1A1281-02**	Prepared & Analyzed: 01/14/2021							
Nitrite as N	1.06	0.0100	mg/L	1.00	ND	106	75-125	1.43	20	
Nitrate as N	6.40	0.0500	mg/L	5.00	1.72	93.7	75-125	0.307	20	
Batch DA10887 - Wet Chem - W - SM 2320 B-2011										
Blank (DA10887-BLK1)			Prepared & Analyzed: 01/16/2021							
Alkalinity to pH 4.5	<1.00	1.00	mg $CaCO_3$/L							
LCS (DA10887-BS1)			Prepared & Analyzed: 01/16/2021							
Alkalinity to pH 4.5	50.0	1.00	mg $CaCO_3$/L	50.0		100	90-110			
Duplicate (DA10887-DUP1)		**Source: D1A1281-04**	Prepared & Analyzed: 01/16/2021							
Alkalinity to pH 4.5	5.00	1.00	mg $CaCO_3$/L		4.50			10.5	20	

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10891 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10891-BLK1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DA10891-BS1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	1.00	0.0106	mg/L	1.00		100	90-110			
Duplicate (DA10891-DUP1)		**Source: D1A1275-03**	Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	0.0138	0.0106	mg/L		0.0117			16.7	20	
Matrix Spike (DA10891-MS1)		**Source: D1A1275-03**	Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	1.26	0.0106	mg/L	1.25	0.0117	99.7	90-110			
Matrix Spike (DA10891-MS2)		**Source: D1A1281-01**	Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	1.23	0.0106	mg/L	1.25	0.0149	97.0	90-110			
Batch DA10893 - Wet Chem - W - SM 4500-Cl E-2011										
Blank (DA10893-BLK1)			Prepared & Analyzed: 01/18/2021							
Chloride	<2.00	2.00	mg/L							
LCS (DA10893-BS1)			Prepared & Analyzed: 01/18/2021							
Chloride	19.5	2.00	mg/L	20.0		97.4	90-110			
Duplicate (DA10893-DUP1)		**Source: D1A1288-05**	Prepared & Analyzed: 01/18/2021							
Chloride	13.8	2.00	mg/L		13.8			0.0153	20	
Matrix Spike (DA10893-MS1)		**Source: D1A1288-05**	Prepared & Analyzed: 01/18/2021							
Chloride	34.2	2.00	mg/L	20.0	13.8	102	75-125			
Matrix Spike Dup (DA10893-MSD1)		**Source: D1A1288-05**	Prepared & Analyzed: 01/18/2021							
Chloride	34.6	2.00	mg/L	20.0	13.8	104	75-125	0.964	20	
Batch DA10975 - Wet-Digestion-W - EPA 351.1										
Blank (DA10975-BLK1)			Prepared & Analyzed: 01/19/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L							
LCS (DA10975-BS1)			Prepared & Analyzed: 01/19/2021							
Total Kjeldahl Nitrogen (TKN)	4.98	0.200	mg/L	5.00		99.5	90-110			
Duplicate (DA10975-DUP1)		**Source: D1A1275-01**	Prepared & Analyzed: 01/19/2021							
Total Kjeldahl Nitrogen (TKN)	0.256	0.200	mg/L		0.314			20.3	20	R3
Matrix Spike (DA10975-MS1)		**Source: D1A1275-01**	Prepared & Analyzed: 01/19/2021							
Total Kjeldahl Nitrogen (TKN)	10.0	0.200	mg/L	10.0	0.314	97.3	90-110			
Matrix Spike (DA10975-MS2)		**Source: D1A1275-02**	Prepared & Analyzed: 01/19/2021							
Total Kjeldahl Nitrogen (TKN)	10.5	0.200	mg/L	10.0	0.387	101	90-110			

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10898 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DA10898-BLK1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	<0.0020	0.0020	mg/L							
Sodium	<1.00	1.00	mg/L							

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10898 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DA10898-BLK2)			Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	<0.0050	0.0050	mg/L							
LCS (DA10898-BS1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.533	0.0020	mg/L	0.500		107	85-115			
Sodium	10.3	1.00	mg/L	10.5		97.9	85-115			
LCS (DA10898-BS2)			Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.523	0.0050	mg/L	0.500		105	85-115			
Duplicate (DA10898-DUP1)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.0045	0.0020	mg/L		0.0042			6.88	20	
Sodium	39.5	1.00	mg/L		39.1			0.946	20	
Duplicate (DA10898-DUP2)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.0660	0.0050	mg/L		0.0653			1.04	20	
Matrix Spike (DA10898-MS1)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.532	0.0020	mg/L	0.500	0.0042	106	70-130			
Sodium	50.0	1.00	mg/L	10.5	39.1	104	70-130			
Matrix Spike (DA10898-MS2)	**Source: D1A1381-02**		Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.549	0.0020	mg/L	0.500	0.0155	107	70-130			
Sodium	216	1.00	mg/L	10.5	207	79.1	70-130			
Matrix Spike (DA10898-MS3)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.576	0.0050	mg/L	0.500	0.0653	102	70-130			
Matrix Spike (DA10898-MS4)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.619	0.0050	mg/L	0.500	0.0653	111	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11074 - 624.1 - EPA 624.1										
Blank (DA11074-BLK1)			Prepared & Analyzed: 01/15/2021							
Acrolein	<20.0	20.0	ug/L							
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*49.4*		ug/L	*50.0*		*98.8*	*70-130*			
Surrogate: Toluene-d8	*50.0*		ug/L	*50.0*		*100*	*70-130*			
Surrogate: Pentafluorobenzene	*42.3*		ug/L	*50.0*		*84.6*	*70-130*			
LCS (DA11074-BS1)			Prepared & Analyzed: 01/15/2021							
Acrolein	34.1	20.0	ug/L	50.0		68.2	60-140			
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0		21.6	1-305			
Surrogate: 1,2-Dichloroethane-d4	*49.3*		ug/L	*50.0*		*98.6*	*70-130*			
Surrogate: Toluene-d8	*50.8*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Pentafluorobenzene	*42.5*		ug/L	*50.0*		*84.9*	*70-130*			
Matrix Spike (DA11074-MS1)	**Source: D1A1281-07**		Prepared & Analyzed: 01/15/2021							
Acrolein	30.3	20.0	ug/L	50.0	ND	60.7	40-160			
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0	ND	19.9	1-305			
Surrogate: 1,2-Dichloroethane-d4	*48.7*		ug/L	*50.0*		*97.4*	*70-130*			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11074 - 624.1 - EPA 624.1										
Matrix Spike (DA11074-MS1)	**Source: D1A1281-07**		Prepared & Analyzed: 01/15/2021							
Surrogate: Toluene-d8	*50.5*		ug/L	*50.0*		*101*	*70-130*			
Surrogate: Pentafluorobenzene	*43.9*		ug/L	*50.0*		*87.7*	*70-130*			
Matrix Spike Dup (DA11074-MSD1)	**Source: D1A1281-07**		Prepared & Analyzed: 01/15/2021							
Acrolein	31.2	20.0	ug/L	50.0	ND	62.3	40-160	2.63	60	
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0	ND	20.5	1-305	2.97	71	
Surrogate: 1,2-Dichloroethane-d4	*50.0*		ug/L	*50.0*		*100*	*70-130*			
Surrogate: Toluene-d8	*50.9*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Pentafluorobenzene	*42.9*		ug/L	*50.0*		*85.8*	*70-130*			
Batch DA11220 - 624.1 - EPA 624.1										
Blank (DA11220-BLK1)			Prepared & Analyzed: 01/20/2021							
Acetone	<10.0	10.0	ug/L							
Acrylonitrile	<20.0	20.0	ug/L							
Benzene	<5.00	5.00	ug/L							
Bromodichloromethane	<5.00	5.00	ug/L							
Bromoform	<5.00	5.00	ug/L							
Bromomethane	<5.00	5.00	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Carbon disulfide	<5.00	5.00	ug/L							
Carbon tetrachloride	<5.00	5.00	ug/L							
Chlorobenzene	<5.00	5.00	ug/L							
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L							
Chloroform	<4.00	4.00	ug/L							
Chloromethane	<5.00	5.00	ug/L							
Dibromochloromethane	<5.00	5.00	ug/L							
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L							
1,2-Dichlorobenzene	<5.00	5.00	ug/L							
1,3-Dichlorobenzene	<5.00	5.00	ug/L							
1,4-Dichlorobenzene	<5.00	5.00	ug/L							
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L							
1,2-Dichloroethane	<5.00	5.00	ug/L							
1,1-Dichloroethane	<5.00	5.00	ug/L							
cis-1,2-Dichloroethene	<5.00	5.00	ug/L							
1,1-Dichloroethene	<5.00	5.00	ug/L							
trans-1,2-Dichloroethene	<4.00	4.00	ug/L							
1,2-Dichloropropane	<5.00	5.00	ug/L							
cis-1,3-Dichloropropene	<5.00	5.00	ug/L							
trans-1,3-Dichloropropene	<5.00	5.00	ug/L							
Ethylbenzene	<5.00	5.00	ug/L							
2-Hexanone (MBK)	<10.0	10.0	ug/L							
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
Blank (DA11220-BLK1)			Prepared & Analyzed: 01/20/2021							
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L							
Styrene	<5.00	5.00	ug/L							
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L							
Tetrachloroethene	<5.00	5.00	ug/L							
Toluene	<5.00	5.00	ug/L							
1,1,2-Trichloroethane	<5.00	5.00	ug/L							
1,1,1-Trichloroethane	<5.00	5.00	ug/L							
Trichloroethene	<5.00	5.00	ug/L							
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L							
Vinyl chloride	<5.00	5.00	ug/L							
m,p-Xylene	<10.0	10.0	ug/L							
o-Xylene	<5.00	5.00	ug/L							
Vinyl acetate	<5.00	5.00	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*52.5*		ug/L	*50.0*		*105*	*70-130*			
Surrogate: Toluene-d8	*51.7*		ug/L	*50.0*		*103*	*70-130*			
LCS (DA11220-BS1)			Prepared & Analyzed: 01/20/2021							
Acetone	31.9	10.0	ug/L	50.0		63.8	42.1-136			
Acrylonitrile	42.2	20.0	ug/L	50.0		84.4	60-140			
Benzene	46.1	5.00	ug/L	50.0		92.3	65-135			
Bromodichloromethane	44.8	5.00	ug/L	50.0		89.6	65-135			
Bromoform	47.3	5.00	ug/L	50.0		94.6	70-130			
Bromomethane	42.6	5.00	ug/L	50.0		85.1	15-185			
2-Butanone (MEK)	35.5	10.0	ug/L	50.0		71.0	63.1-143			
Carbon disulfide	42.6	5.00	ug/L	50.0		85.2	63.5-124			
Carbon tetrachloride	46.9	5.00	ug/L	50.0		93.7	70-130			
Chlorobenzene	47.3	5.00	ug/L	50.0		94.6	65-135			
Chloroethane (Ethyl chloride)	37.2	5.00	ug/L	50.0		74.5	40-160			
Chloroform	47.8	4.00	ug/L	50.0		95.6	70-135			
Chloromethane	44.1	5.00	ug/L	50.0		88.2	1-205			
Dibromochloromethane	47.6	5.00	ug/L	50.0		95.2	70-135			
Dibromomethane (Methylene bromide)	47.7	5.00	ug/L	50.0		95.4	73.8-124			
1,2-Dichlorobenzene	44.5	5.00	ug/L	50.0		89.0	65-135			
1,3-Dichlorobenzene	44.5	5.00	ug/L	50.0		88.9	70-130			
1,4-Dichlorobenzene	43.8	5.00	ug/L	50.0		87.5	65-135			
Dichlorodifluoromethane (Freon-12)	41.9	5.00	ug/L	50.0		83.8	34.7-129			
1,2-Dichloroethane	48.4	5.00	ug/L	50.0		96.9	70-130			
1,1-Dichloroethane	44.6	5.00	ug/L	50.0		89.1	70-130			
cis-1,2-Dichloroethene	44.4	5.00	ug/L	50.0		88.8	75.5-125			
1,1-Dichloroethene	42.3	5.00	ug/L	50.0		84.6	50-150			
trans-1,2-Dichloroethene	49.3	4.00	ug/L	50.0		98.5	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
LCS (DA11220-BS1)				Prepared & Analyzed: 01/20/2021						
1,2-Dichloropropane	45.6	5.00	ug/L	50.0		91.2	35-165			
cis-1,3-Dichloropropene	49.3	5.00	ug/L	50.0		98.6	25-175			
trans-1,3-Dichloropropene	46.0	5.00	ug/L	50.0		91.9	50-150			
Ethylbenzene	45.7	5.00	ug/L	50.0		91.5	60-140			
2-Hexanone (MBK)	39.7	10.0	ug/L	50.0		79.4	73.6-130			
Methyl tert-butyl ether (MTBE)	42.9	5.00	ug/L	50.0		85.7	69-151			
Methylene chloride (Dichloromethane)	47.5	1.00	ug/L	50.0		95.0	60-140			
4-Methyl-2-pentanone (MIBK)	38.8	10.0	ug/L	50.0		77.7	72.5-129			
Styrene	49.9	5.00	ug/L	50.0		99.8	79.2-127			
1,1,2,2-Tetrachloroethane	50.5	5.00	ug/L	50.0		101	60-140			
Tetrachloroethene	46.2	5.00	ug/L	50.0		92.5	70-130			
Toluene	45.7	5.00	ug/L	50.0		91.5	70-130			
1,1,2-Trichloroethane	45.7	5.00	ug/L	50.0		91.4	70-130			
1,1,1-Trichloroethane	47.3	5.00	ug/L	50.0		94.6	70-130			
Trichloroethene	48.2	5.00	ug/L	50.0		96.4	65-135			
Trichlorofluoromethane (Freon 11)	35.8	5.00	ug/L	50.0		71.6	50-150			
Vinyl chloride	44.6	5.00	ug/L	50.0		89.2	5-195			
m,p-Xylene	98.6	10.0	ug/L	100		98.6	77.1-129			
o-Xylene	47.1	5.00	ug/L	50.0		94.3	78.8-126			
Vinyl acetate	42.5	5.00	ug/L	50.0		85.1	60-140			
Surrogate: 1,2-Dichloroethane-d4	*47.6*		ug/L	*50.0*		*95.2*	*70-130*			
Surrogate: Toluene-d8	*49.8*		ug/L	*50.0*		*99.6*	*70-130*			
Surrogate: Pentafluorobenzene	*51.6*		ug/L	*50.0*		*103*	*70-130*			
Matrix Spike (DA11220-MS1)	**Source: D1A1229-01**			Prepared & Analyzed: 01/21/2021						
Acetone	32.1	10.0	ug/L	50.0	ND	64.2	0-200			
Acrylonitrile	43.2	20.0	ug/L	50.0	ND	86.4	40-160			
Benzene	51.1	5.00	ug/L	50.0	ND	102	37-151			
Bromodichloromethane	47.7	5.00	ug/L	50.0	ND	95.4	35-155			
Bromoform	45.5	5.00	ug/L	50.0	ND	91.0	45-169			
Bromomethane	47.8	5.00	ug/L	50.0	ND	95.6	1-242			
2-Butanone (MEK)	37.3	10.0	ug/L	50.0	ND	74.6	0-200			
Carbon disulfide	46.0	5.00	ug/L	50.0	ND	92.0	0-200			
Carbon tetrachloride	54.5	5.00	ug/L	50.0	ND	109	70-140			
Chlorobenzene	49.6	5.00	ug/L	50.0	ND	99.3	37-160			
Chloroethane (Ethyl chloride)	41.4	5.00	ug/L	50.0	ND	82.8	14-230			
Chloroform	51.4	4.00	ug/L	50.0	ND	103	51-138			
Chloromethane	54.1	5.00	ug/L	50.0	ND	108	1-273			
Dibromochloromethane	46.8	5.00	ug/L	50.0	ND	93.7	53-149			
Dibromomethane (Methylene bromide)	48.5	5.00	ug/L	50.0	ND	96.9	0-200			
1,2-Dichlorobenzene	44.3	5.00	ug/L	50.0	ND	88.7	18-190			
1,3-Dichlorobenzene	44.7	5.00	ug/L	50.0	ND	89.3	59-156			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
Matrix Spike (DA11220-MS1)	**Source: D1A1229-01**		Prepared & Analyzed: 01/21/2021							
1,4-Dichlorobenzene	42.2	5.00	ug/L	50.0	ND	84.4	18-190			
Dichlorodifluoromethane (Freon-12)	51.1	5.00	ug/L	50.0	ND	102	0-200			
1,2-Dichloroethane	50.3	5.00	ug/L	50.0	ND	101	49-155			
1,1-Dichloroethane	49.3	5.00	ug/L	50.0	ND	98.5	59-155			
cis-1,2-Dichloroethene	47.2	5.00	ug/L	50.0	ND	94.4	0-200			
1,1-Dichloroethene	47.8	5.00	ug/L	50.0	ND	95.6	1-234			
trans-1,2-Dichloroethene	53.0	4.00	ug/L	50.0	ND	106	54-156			
1,2-Dichloropropane	48.0	5.00	ug/L	50.0	ND	95.9	1-210			
cis-1,3-Dichloropropene	47.6	5.00	ug/L	50.0	ND	95.1	1-227			
trans-1,3-Dichloropropene	45.1	5.00	ug/L	50.0	ND	90.2	17-183			
Ethylbenzene	49.3	5.00	ug/L	50.0	ND	98.6	37-162			
2-Hexanone (MBK)	38.1	10.0	ug/L	50.0	ND	76.1	0-200			
Methyl tert-butyl ether (MTBE)	42.2	5.00	ug/L	50.0	ND	84.4	0-200			
Methylene chloride (Dichloromethane)	50.5	1.00	ug/L	50.0	ND	101	1-221			
4-Methyl-2-pentanone (MIBK)	38.3	10.0	ug/L	50.0	ND	76.5	0-200			
Styrene	52.3	5.00	ug/L	50.0	ND	105	0-200			
1,1,2,2-Tetrachloroethane	55.4	5.00	ug/L	50.0	ND	111	46-157			
Tetrachloroethene	49.1	5.00	ug/L	50.0	ND	98.2	64-148			
Toluene	49.1	5.00	ug/L	50.0	ND	98.2	47-150			
1,1,2-Trichloroethane	46.1	5.00	ug/L	50.0	ND	92.2	52-150			
1,1,1-Trichloroethane	53.6	5.00	ug/L	50.0	ND	107	52-162			
Trichloroethene	49.4	5.00	ug/L	50.0	ND	98.7	70-157			
Trichlorofluoromethane (Freon 11)	41.2	5.00	ug/L	50.0	ND	82.3	17-181			
Vinyl chloride	50.9	5.00	ug/L	50.0	ND	102	1-251			
m,p-Xylene	106	10.0	ug/L	100	ND	106	0-200			
o-Xylene	49.7	5.00	ug/L	50.0	ND	99.4	0-200			
Vinyl acetate	56.2	5.00	ug/L	50.0	ND	112	60-140			
Surrogate: 1,2-Dichloroethane-d4	*48.4*		ug/L	*50.0*		*96.8*	*70-130*			
Surrogate: Toluene-d8	*48.5*		ug/L	*50.0*		*96.9*	*70-130*			
Surrogate: Pentafluorobenzene	*53.2*		ug/L	*50.0*		*106*	*70-130*			
Matrix Spike Dup (DA11220-MSD1)	**Source: D1A1229-01**		Prepared & Analyzed: 01/21/2021							
Acetone	32.3	10.0	ug/L	50.0	ND	64.7	0-200	0.652	200	
Acrylonitrile	41.1	20.0	ug/L	50.0	ND	82.2	40-160	5.03	60	
Benzene	48.5	5.00	ug/L	50.0	ND	97.0	37-151	5.10	61	
Bromodichloromethane	45.0	5.00	ug/L	50.0	ND	90.0	35-155	5.83	56	
Bromoform	43.5	5.00	ug/L	50.0	ND	86.9	45-169	4.61	42	
Bromomethane	46.9	5.00	ug/L	50.0	ND	93.8	1-242	1.84	61	
2-Butanone (MEK)	38.6	10.0	ug/L	50.0	ND	77.2	0-200	3.32	200	
Carbon disulfide	43.3	5.00	ug/L	50.0	ND	86.6	0-200	6.05	200	
Carbon tetrachloride	49.9	5.00	ug/L	50.0	ND	99.8	70-140	8.72	41	
Chlorobenzene	45.8	5.00	ug/L	50.0	ND	91.5	37-160	8.11	53	
Chloroethane (Ethyl chloride)	37.9	5.00	ug/L	50.0	ND	75.7	14-230	8.96	78	

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
Matrix Spike Dup (DA11220-MSD1)	**Source: D1A1229-01**		Prepared & Analyzed: 01/21/2021							
Chloroform	48.9	4.00	ug/L	50.0	ND	97.8	51-138	5.00	54	
Chloromethane	51.6	5.00	ug/L	50.0	ND	103	1-273	4.84	60	
Dibromochloromethane	44.9	5.00	ug/L	50.0	ND	89.8	53-149	4.21	50	
Dibromomethane (Methylene bromide)	47.2	5.00	ug/L	50.0	ND	94.5	0-200	2.59	200	
1,2-Dichlorobenzene	41.5	5.00	ug/L	50.0	ND	83.0	18-190	6.57	57	
1,3-Dichlorobenzene	42.1	5.00	ug/L	50.0	ND	84.2	59-156	5.88	43	
1,4-Dichlorobenzene	40.8	5.00	ug/L	50.0	ND	81.7	18-190	3.23	57	
Dichlorodifluoromethane (Freon-12)	49.4	5.00	ug/L	50.0	ND	98.7	0-200	3.39	200	
1,2-Dichloroethane	49.3	5.00	ug/L	50.0	ND	98.5	49-155	2.09	49	
1,1-Dichloroethane	45.1	5.00	ug/L	50.0	ND	90.2	59-155	8.84	40	
cis-1,2-Dichloroethene	43.8	5.00	ug/L	50.0	ND	87.5	0-200	7.52	200	
1,1-Dichloroethene	45.1	5.00	ug/L	50.0	ND	90.2	1-234	5.83	32	
trans-1,2-Dichloroethene	49.0	4.00	ug/L	50.0	ND	98.1	54-156	7.78	45	
1,2-Dichloropropane	46.4	5.00	ug/L	50.0	ND	92.7	1-210	3.44	55	
cis-1,3-Dichloropropene	45.2	5.00	ug/L	50.0	ND	90.4	1-227	5.11	58	
trans-1,3-Dichloropropene	42.9	5.00	ug/L	50.0	ND	85.8	17-183	5.02	86	
Ethylbenzene	45.2	5.00	ug/L	50.0	ND	90.5	37-162	8.61	63	
2-Hexanone (MBK)	37.1	10.0	ug/L	50.0	ND	74.3	0-200	2.45	200	
Methyl tert-butyl ether (MTBE)	41.5	5.00	ug/L	50.0	ND	83.0	0-200	1.74	200	
Methylene chloride (Dichloromethane)	47.4	1.00	ug/L	50.0	ND	94.7	1-221	6.50	28	
4-Methyl-2-pentanone (MIBK)	36.0	10.0	ug/L	50.0	ND	71.9	0-200	6.23	200	
Styrene	48.5	5.00	ug/L	50.0	ND	96.9	0-200	7.58	200	
1,1,2,2-Tetrachloroethane	52.1	5.00	ug/L	50.0	ND	104	46-157	6.25	61	
Tetrachloroethene	45.8	5.00	ug/L	50.0	ND	91.7	64-148	6.85	39	
Toluene	44.8	5.00	ug/L	50.0	ND	89.6	47-150	9.18	41	
1,1,2-Trichloroethane	42.8	5.00	ug/L	50.0	ND	85.5	52-150	7.56	45	
1,1,1-Trichloroethane	51.1	5.00	ug/L	50.0	ND	102	52-162	4.93	36	
Trichloroethene	45.8	5.00	ug/L	50.0	ND	91.5	70-157	7.59	48	
Trichlorofluoromethane (Freon 11)	38.7	5.00	ug/L	50.0	ND	77.4	17-181	6.11	84	
Vinyl chloride	47.7	5.00	ug/L	50.0	ND	95.3	1-251	6.65	66	
m,p-Xylene	97.1	10.0	ug/L	100	ND	97.1	0-200	8.40	200	
o-Xylene	46.4	5.00	ug/L	50.0	ND	92.9	0-200	6.78	200	
Vinyl acetate	55.1	5.00	ug/L	50.0	ND	110	60-140	2.08	25	
Surrogate: 1,2-Dichloroethane-d4	*49.6*		ug/L	*50.0*		*99.2*	*70-130*			
Surrogate: Toluene-d8	*48.7*		ug/L	*50.0*		*97.4*	*70-130*			
Surrogate: Pentafluorobenzene	*52.2*		ug/L	*50.0*		*104*	*70-130*			

MICROBAC®

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A1282

Definitions

MCL:	US EPA Maximum Contaminant Level
mg CaCO3/L	Milligrams Calcium Carbonate per Liter
mg/L:	Milligrams per Liter
R3:	Duplicate RPD is outside of acceptance criteria. The difference between the results is less than 2x Method Reporting Limit.
RL:	Reporting Limit
RPD:	Relative Percent Difference
ug/L:	Micrograms per Liter
Y1:	Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.3ºC

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008 Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Melisa L. Montgomery
Quality Assurance Officer
Reported: 01/22/2021 16:03

MICROBAC

CHAIN

61 Louisa Vi
Tel: (860)77

Microbac Laboratories, Inc.

D 1 A 1 2 8 2
W & C - Plymouth

FOR LAB USE ONLY
Lab WO#
Project Manager

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
DELIVERY: ROBERT SCOTT
E-MAIL: [illegible]
PHONE: 508-830-4159 FAX: 508-732-0238

BILL TO: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DR.
PLYMOUTH, Ma
PURCHASE ORDER #
ATTENTION: ACCOUNTS PAYABLE
PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP
LOCATION: ID 11773
WELLS - QUARTERLY
ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL
ROBERT SCOTT
PHONE: CELL - 860-204-7988
FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
475																						
Well # (250 mL)	1/14/21	1032		X	WW	1	X	X											X			
Well # (500 mL)				X	WW	x			X	X		x						X				
Well # (250 mL)(filtered)				X	WW	1					X							X				
Well # (250 mL)				X	WW	1												X				
Well # (500 mL)				X	WW	1							X					X				
Well # (250 mL)				X	WW	1								X	X	X					X	
Well # (40 mL vial)				X	WW	2											X	X				
Well # (40 mL vial)				X	WW	2											X			X		
475	1/14/21	1032																				

PRESERVATIVE VERIFIED

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	1/14/21	
RECEIVED:		1350
RELINQUISHED:	1/14/21	1/14/21
RECEIVED:	1/14/2021	1/14/2021 @ 1350
RELINQUISHED:	1.14.2021	1735
RECEIVED:	1-14-21	1735

TURN AROUND (INDICATE IN CALENDAR DAYS):
FAX ☐ HARD COPY ☐ E-MAIL ☐
EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE
COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): ☐ COMPLIANT
COOLED ☐ AMBIENT ☐ 3.3°C

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A1283

Project Description

Wells - Quarterly

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Friday, January 22, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A1283

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Quarterly

Project / PO Number: 346346
Received: 01/14/2021
Reported: 01/22/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well 6S	D1A1283-01	Groundwater	Grab		01/14/21 08:28	01/14/21 17:35
Well 6S	D1A1283-02	Groundwater	Grab		01/14/21 08:28	01/14/21 17:35
Well 6S (filtered)	D1A1283-03	Groundwater	Grab		01/14/21 08:28	01/14/21 17:35
Well 6S	D1A1283-04	Groundwater	Grab		01/14/21 08:28	01/14/21 17:35
Well 6S	D1A1283-05	Groundwater	Grab		01/14/21 08:28	01/14/21 17:35
Well 6S	D1A1283-06	Groundwater	Grab		01/14/21 08:28	01/14/21 17:35
Well 6S	D1A1283-07	Groundwater	Grab		01/14/21 08:28	01/14/21 17:35
Well 6S	D1A1283-08	Groundwater	Grab		01/14/21 08:28	01/14/21 17:35

CERTIFICATE OF ANALYSIS

D1A1283

Analytical Testing Parameters

Client Sample ID: Well 6S
Sample Matrix: Groundwater
Lab Sample ID: D1A1283-01
Collected By: Customer
Collection Date: 01/14/2021 8:28

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 351.1								
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L	1		01/19/21 0941	01/19/21 1659	CLW
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	<0.0106	0.0106	mg/L	1		01/18/21 1619	01/19/21 1038	CLW

Client Sample ID: Well 6S
Sample Matrix: Groundwater
Lab Sample ID: D1A1283-02
Collected By: Customer
Collection Date: 01/14/2021 8:28

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-NO_3^- F-2011								
Nitrate as N	**1.87**	0.0500	mg/L	1			01/14/21 2030	DJM
Nitrite as N	<0.0100	0.0100	mg/L	1	**Y1**		01/14/21 2030	DJM

Client Sample ID: Well 6S (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1A1283-03
Collected By: Customer
Collection Date: 01/14/2021 8:28

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0130**	0.0100	mg/L	1		01/14/21 1753	01/14/21 1925	DJM

Client Sample ID: Well 6S
Sample Matrix: Groundwater
Lab Sample ID: D1A1283-04
Collected By: Customer
Collection Date: 01/14/2021 8:28

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 2320 B-2011								
Alkalinity to pH 4.5	**3.50**	1.00	mg CaCO3/L	1			01/16/21 1538	MAD

CERTIFICATE OF ANALYSIS

D1A1283

Client Sample ID:	Well 6S		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A1283-05	**Collection Date:**	01/14/2021 8:28

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-Cl E-2011								
Chloride	**65.0**	2.00	mg/L	1			01/18/21 1617	CLW

Client Sample ID:	Well 6S		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A1283-06	**Collection Date:**	01/14/2021 8:28

Metals Total by ICP	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.7, Rv. 4.4 (1994)								
Boron	**0.0070**	0.0050	mg/L	1	**Y1**	01/18/21 1333	01/20/21 1306	JDF
Copper	<0.0020	0.0020	mg/L	1		01/18/21 1333	01/19/21 1608	JDF
Sodium	**12.0**	1.00	mg/L	1		01/18/21 1333	01/19/21 1608	JDF

Client Sample ID:	Well 6S		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A1283-07	**Collection Date:**	01/14/2021 8:28

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acrolein	<20.0	20.0	ug/L	1			01/15/21 1440	JAN
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	1			01/15/21 1440	JAN
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 70-130	% Rec	1			01/15/21 1440	JAN
Surrogate: Toluene-d8	101	Limit: 70-130	% Rec	1			01/15/21 1440	JAN
Surrogate: Pentafluorobenzene	82.9	Limit: 70-130	% Rec	1			01/15/21 1440	JAN

CERTIFICATE OF ANALYSIS

D1A1283

Client Sample ID:	Well 6S		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A1283-08	**Collection Date:**	01/14/2021 8:28

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acetone	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0159	JAN
Acrylonitrile	<20.0	20.0	ug/L	1			01/21/21 0159	JAN
Benzene	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
Bromodichloromethane	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
Bromoform	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
Bromomethane	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
2-Butanone (MEK)	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0159	JAN
Carbon disulfide	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0159	JAN
Carbon tetrachloride	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
Chlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
Chloroform	<4.00	4.00	ug/L	1			01/21/21 0159	JAN
Chloromethane	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
Dibromochloromethane	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0159	JAN
1,2-Dichlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
1,3-Dichlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
1,4-Dichlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0159	JAN
1,2-Dichloroethane	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
1,1-Dichloroethane	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
cis-1,2-Dichloroethene	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0159	JAN
1,1-Dichloroethene	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
trans-1,2-Dichloroethene	<4.00	4.00	ug/L	1			01/21/21 0159	JAN
1,2-Dichloropropane	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
cis-1,3-Dichloropropene	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
trans-1,3-Dichloropropene	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
Ethylbenzene	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
2-Hexanone (MBK)	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0159	JAN
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0159	JAN
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L	1			01/21/21 0159	JAN
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0159	JAN
Styrene	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0159	JAN
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
Tetrachloroethene	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
Toluene	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
1,1,2-Trichloroethane	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
1,1,1-Trichloroethane	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
Trichloroethene	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
Vinyl chloride	<5.00	5.00	ug/L	1			01/21/21 0159	JAN
m,p-Xylene	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0159	JAN

CERTIFICATE OF ANALYSIS

D1A1283

Client Sample ID:	Well 6S		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A1283-08	**Collection Date:**	01/14/2021 8:28

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
o-Xylene	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0159	JAN
Vinyl acetate	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0159	JAN
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 70-130	% Rec	1			01/21/21 0159	JAN
Surrogate: Toluene-d8	103	Limit: 70-130	% Rec	1			01/21/21 0159	JAN
Surrogate: Pentafluorobenzene	103	Limit: 70-130	% Rec	1			01/21/21 0159	JAN

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DA10785	DA10785-BS1	
		DA10785-BLK1	
		DA10785-MS1	D1A1285-03
		DA10785-DUP1	D1A1285-03
		DA10785-MS2	D1A1288-03
		D1A1283-03	Well 6S (filtered)

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-$NO3^{-}$ F-2011	DA10796	DA10796-DUP1	D1A1281-02
		DA10796-DUP1	D1A1281-02
		DA10796-MS1	D1A1281-02
		DA10796-MS1	D1A1281-02
		DA10796-MSD1	D1A1281-02
		DA10796-MSD1	D1A1281-02
		D1A1283-02	Well 6S
		D1A1283-02	Well 6S
		DA10796-BS1	
		DA10796-BS2	
		DA10796-BLK1	
		DA10796-BLK1	

Method	Batch	Laboratory ID	Client / Source ID
SM 2320 B-2011	DA10887	DA10887-BLK1	
		DA10887-DUP1	D1A1281-04
		DA10887-BS1	
		D1A1283-04	Well 6S

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DA10891	DA10891-BS1	
		DA10891-BLK1	
		DA10891-MS1	D1A1275-03
		DA10891-MS2	D1A1281-01
		D1A1283-01	Well 6S
		DA10891-DUP1	D1A1275-03

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-Cl E-2011	DA10893	DA10893-BS1	
		DA10893-BLK1	
		DA10893-DUP1	D1A1288-05
		DA10893-MS1	D1A1288-05
		DA10893-MSD1	D1A1288-05

SM 4500-Cl E-2011	DA10893	D1A1283-05	Well 6S

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.7, Rv. 4.4 (1994)	DA10898	DA10898-BLK1	
		DA10898-BS1	
		DA10898-DUP1	D1A1338-01
		DA10898-MS1	D1A1338-01
		D1A1283-06	Well 6S
		D1A1283-06	Well 6S
		DA10898-MS2	D1A1381-02
		DA10898-BLK2	
		DA10898-BS2	
		DA10898-DUP2	D1A1338-01
		DA10898-MS3	D1A1338-01
		D1A1283-06	Well 6S
		DA10898-MS4	D1A1338-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 351.1	DA10975	DA10975-BS1	
		DA10975-BLK1	
		DA10975-DUP1	D1A1275-01
		DA10975-MS1	D1A1275-01
		DA10975-MS2	D1A1275-02
		D1A1283-01	Well 6S

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DA11074	DA11074-BS1	
		DA11074-BLK1	
		D1A1283-07	Well 6S
		DA11074-MS1	D1A1281-07
		DA11074-MSD1	D1A1281-07

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DA11220	DA11220-BS1	
		DA11220-BLK1	
		D1A1283-08	Well 6S
		DA11220-MS1	D1A1229-01
		DA11220-MSD1	D1A1229-01

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10785 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10785-BLK1)	Prepared & Analyzed: 01/14/2021									

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10785 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10785-BLK1)			Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DA10785-BS1)			Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.974	0.0100	mg/L	1.00		97.3	90-110			
Duplicate (DA10785-DUP1)		**Source: D1A1285-03**	Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.0150	0.0100	mg/L		0.0170			12.5	20	
Matrix Spike (DA10785-MS1)		**Source: D1A1285-03**	Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.981	0.0100	mg/L	1.00	0.0170	96.3	90-110			
Matrix Spike (DA10785-MS2)		**Source: D1A1288-03**	Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.997	0.0100	mg/L	1.00	0.0160	98.0	90-110			
Batch DA10796 - Wet Chem - W - SM 4500-NO_3^- F-2011										
Blank (DA10796-BLK1)			Prepared & Analyzed: 01/14/2021							
Nitrite as N	<0.0100	0.0100	mg/L							
Nitrate as N	<0.0500	0.0500	mg/L							
LCS (DA10796-BS1)			Prepared & Analyzed: 01/14/2021							
Nitrate as N	4.83	0.0500	mg/L	5.00		96.6	90-110			
LCS (DA10796-BS2)			Prepared & Analyzed: 01/14/2021							
Nitrite as N	1.01	0.0100	mg/L	1.00		101	90-110			
Duplicate (DA10796-DUP1)		**Source: D1A1281-02**	Prepared & Analyzed: 01/14/2021							
Nitrite as N	<0.0100	0.0100	mg/L		ND				20	
Nitrate as N	1.71	0.0500	mg/L		1.72			0.117	20	
Matrix Spike (DA10796-MS1)		**Source: D1A1281-02**	Prepared & Analyzed: 01/14/2021							
Nitrite as N	1.08	0.0100	mg/L	1.00	ND	108	75-125			
Nitrate as N	6.42	0.0500	mg/L	5.00	1.72	94.1	75-125			
Matrix Spike Dup (DA10796-MSD1)		**Source: D1A1281-02**	Prepared & Analyzed: 01/14/2021							
Nitrite as N	1.06	0.0100	mg/L	1.00	ND	106	75-125	1.43	20	
Nitrate as N	6.40	0.0500	mg/L	5.00	1.72	93.7	75-125	0.307	20	
Batch DA10887 - Wet Chem - W - SM 2320 B-2011										
Blank (DA10887-BLK1)			Prepared & Analyzed: 01/16/2021							
Alkalinity to pH 4.5	<1.00	1.00	mg $CaCO_3$/L							
LCS (DA10887-BS1)			Prepared & Analyzed: 01/16/2021							
Alkalinity to pH 4.5	50.0	1.00	mg $CaCO_3$/L	50.0		100	90-110			
Duplicate (DA10887-DUP1)		**Source: D1A1281-04**	Prepared & Analyzed: 01/16/2021							
Alkalinity to pH 4.5	5.00	1.00	mg $CaCO_3$/L		4.50			10.5	20	

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10891 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10891-BLK1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DA10891-BS1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	1.00	0.0106	mg/L	1.00		100	90-110			
Duplicate (DA10891-DUP1)		**Source: D1A1275-03**	Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	0.0138	0.0106	mg/L		0.0117			16.7	20	
Matrix Spike (DA10891-MS1)		**Source: D1A1275-03**	Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	1.26	0.0106	mg/L	1.25	0.0117	99.7	90-110			
Matrix Spike (DA10891-MS2)		**Source: D1A1281-01**	Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	1.23	0.0106	mg/L	1.25	0.0149	97.0	90-110			
Batch DA10893 - Wet Chem - W - SM 4500-Cl E-2011										
Blank (DA10893-BLK1)			Prepared & Analyzed: 01/18/2021							
Chloride	<2.00	2.00	mg/L							
LCS (DA10893-BS1)			Prepared & Analyzed: 01/18/2021							
Chloride	19.5	2.00	mg/L	20.0		97.4	90-110			
Duplicate (DA10893-DUP1)		**Source: D1A1288-05**	Prepared & Analyzed: 01/18/2021							
Chloride	13.8	2.00	mg/L		13.8			0.0153	20	
Matrix Spike (DA10893-MS1)		**Source: D1A1288-05**	Prepared & Analyzed: 01/18/2021							
Chloride	34.2	2.00	mg/L	20.0	13.8	102	75-125			
Matrix Spike Dup (DA10893-MSD1)		**Source: D1A1288-05**	Prepared & Analyzed: 01/18/2021							
Chloride	34.6	2.00	mg/L	20.0	13.8	104	75-125	0.964	20	
Batch DA10975 - Wet-Digestion-W - EPA 351.1										
Blank (DA10975-BLK1)			Prepared & Analyzed: 01/19/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L							
LCS (DA10975-BS1)			Prepared & Analyzed: 01/19/2021							
Total Kjeldahl Nitrogen (TKN)	4.98	0.200	mg/L	5.00		99.5	90-110			
Duplicate (DA10975-DUP1)		**Source: D1A1275-01**	Prepared & Analyzed: 01/19/2021							
Total Kjeldahl Nitrogen (TKN)	0.256	0.200	mg/L		0.314			20.3	20	R3
Matrix Spike (DA10975-MS1)		**Source: D1A1275-01**	Prepared & Analyzed: 01/19/2021							
Total Kjeldahl Nitrogen (TKN)	10.0	0.200	mg/L	10.0	0.314	97.3	90-110			
Matrix Spike (DA10975-MS2)		**Source: D1A1275-02**	Prepared & Analyzed: 01/19/2021							
Total Kjeldahl Nitrogen (TKN)	10.5	0.200	mg/L	10.0	0.387	101	90-110			

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10898 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DA10898-BLK1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	<0.0020	0.0020	mg/L							
Sodium	<1.00	1.00	mg/L							

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10898 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DA10898-BLK2)			Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	<0.0050	0.0050	mg/L							
LCS (DA10898-BS1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.533	0.0020	mg/L	0.500		107	85-115			
Sodium	10.3	1.00	mg/L	10.5		97.9	85-115			
LCS (DA10898-BS2)			Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.523	0.0050	mg/L	0.500		105	85-115			
Duplicate (DA10898-DUP1)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.0045	0.0020	mg/L		0.0042			6.88	20	
Sodium	39.5	1.00	mg/L		39.1			0.946	20	
Duplicate (DA10898-DUP2)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.0660	0.0050	mg/L		0.0653			1.04	20	
Matrix Spike (DA10898-MS1)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.532	0.0020	mg/L	0.500	0.0042	106	70-130			
Sodium	50.0	1.00	mg/L	10.5	39.1	104	70-130			
Matrix Spike (DA10898-MS2)	**Source: D1A1381-02**		Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.549	0.0020	mg/L	0.500	0.0155	107	70-130			
Sodium	216	1.00	mg/L	10.5	207	79.1	70-130			
Matrix Spike (DA10898-MS3)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.576	0.0050	mg/L	0.500	0.0653	102	70-130			
Matrix Spike (DA10898-MS4)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.619	0.0050	mg/L	0.500	0.0653	111	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11074 - 624.1 - EPA 624.1										
Blank (DA11074-BLK1)			Prepared & Analyzed: 01/15/2021							
Acrolein	<20.0	20.0	ug/L							
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*49.4*		ug/L	*50.0*		*98.8*	*70-130*			
Surrogate: Toluene-d8	*50.0*		ug/L	*50.0*		*100*	*70-130*			
Surrogate: Pentafluorobenzene	*42.3*		ug/L	*50.0*		*84.6*	*70-130*			
LCS (DA11074-BS1)			Prepared & Analyzed: 01/15/2021							
Acrolein	34.1	20.0	ug/L	50.0		68.2	60-140			
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0		21.6	1-305			
Surrogate: 1,2-Dichloroethane-d4	*49.3*		ug/L	*50.0*		*98.6*	*70-130*			
Surrogate: Toluene-d8	*50.8*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Pentafluorobenzene	*42.5*		ug/L	*50.0*		*84.9*	*70-130*			
Matrix Spike (DA11074-MS1)	**Source: D1A1281-07**		Prepared & Analyzed: 01/15/2021							
Acrolein	30.3	20.0	ug/L	50.0	ND	60.7	40-160			
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0	ND	19.9	1-305			
Surrogate: 1,2-Dichloroethane-d4	*48.7*		ug/L	*50.0*		*97.4*	*70-130*			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11074 - 624.1 - EPA 624.1										
Matrix Spike (DA11074-MS1)	**Source: D1A1281-07**		Prepared & Analyzed: 01/15/2021							
Surrogate: Toluene-d8	*50.5*		ug/L	*50.0*		*101*	*70-130*			
Surrogate: Pentafluorobenzene	*43.9*		ug/L	*50.0*		*87.7*	*70-130*			
Matrix Spike Dup (DA11074-MSD1)	**Source: D1A1281-07**		Prepared & Analyzed: 01/15/2021							
Acrolein	31.2	20.0	ug/L	50.0	ND	62.3	40-160	2.63	60	
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0	ND	20.5	1-305	2.97	71	
Surrogate: 1,2-Dichloroethane-d4	*50.0*		ug/L	*50.0*		*100*	*70-130*			
Surrogate: Toluene-d8	*50.9*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Pentafluorobenzene	*42.9*		ug/L	*50.0*		*85.8*	*70-130*			
Batch DA11220 - 624.1 - EPA 624.1										
Blank (DA11220-BLK1)			Prepared & Analyzed: 01/20/2021							
Acetone	<10.0	10.0	ug/L							
Acrylonitrile	<20.0	20.0	ug/L							
Benzene	<5.00	5.00	ug/L							
Bromodichloromethane	<5.00	5.00	ug/L							
Bromoform	<5.00	5.00	ug/L							
Bromomethane	<5.00	5.00	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Carbon disulfide	<5.00	5.00	ug/L							
Carbon tetrachloride	<5.00	5.00	ug/L							
Chlorobenzene	<5.00	5.00	ug/L							
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L							
Chloroform	<4.00	4.00	ug/L							
Chloromethane	<5.00	5.00	ug/L							
Dibromochloromethane	<5.00	5.00	ug/L							
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L							
1,2-Dichlorobenzene	<5.00	5.00	ug/L							
1,3-Dichlorobenzene	<5.00	5.00	ug/L							
1,4-Dichlorobenzene	<5.00	5.00	ug/L							
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L							
1,2-Dichloroethane	<5.00	5.00	ug/L							
1,1-Dichloroethane	<5.00	5.00	ug/L							
cis-1,2-Dichloroethene	<5.00	5.00	ug/L							
1,1-Dichloroethene	<5.00	5.00	ug/L							
trans-1,2-Dichloroethene	<4.00	4.00	ug/L							
1,2-Dichloropropane	<5.00	5.00	ug/L							
cis-1,3-Dichloropropene	<5.00	5.00	ug/L							
trans-1,3-Dichloropropene	<5.00	5.00	ug/L							
Ethylbenzene	<5.00	5.00	ug/L							
2-Hexanone (MBK)	<10.0	10.0	ug/L							
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
Blank (DA11220-BLK1)			Prepared & Analyzed: 01/20/2021							
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L							
Styrene	<5.00	5.00	ug/L							
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L							
Tetrachloroethene	<5.00	5.00	ug/L							
Toluene	<5.00	5.00	ug/L							
1,1,2-Trichloroethane	<5.00	5.00	ug/L							
1,1,1-Trichloroethane	<5.00	5.00	ug/L							
Trichloroethene	<5.00	5.00	ug/L							
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L							
Vinyl chloride	<5.00	5.00	ug/L							
m,p-Xylene	<10.0	10.0	ug/L							
o-Xylene	<5.00	5.00	ug/L							
Vinyl acetate	<5.00	5.00	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*52.5*		ug/L	*50.0*		*105*	*70-130*			
Surrogate: Toluene-d8	*51.7*		ug/L	*50.0*		*103*	*70-130*			
LCS (DA11220-BS1)			Prepared & Analyzed: 01/20/2021							
Acetone	31.9	10.0	ug/L	50.0		63.8	42.1-136			
Acrylonitrile	42.2	20.0	ug/L	50.0		84.4	60-140			
Benzene	46.1	5.00	ug/L	50.0		92.3	65-135			
Bromodichloromethane	44.8	5.00	ug/L	50.0		89.6	65-135			
Bromoform	47.3	5.00	ug/L	50.0		94.6	70-130			
Bromomethane	42.6	5.00	ug/L	50.0		85.1	15-185			
2-Butanone (MEK)	35.5	10.0	ug/L	50.0		71.0	63.1-143			
Carbon disulfide	42.6	5.00	ug/L	50.0		85.2	63.5-124			
Carbon tetrachloride	46.9	5.00	ug/L	50.0		93.7	70-130			
Chlorobenzene	47.3	5.00	ug/L	50.0		94.6	65-135			
Chloroethane (Ethyl chloride)	37.2	5.00	ug/L	50.0		74.5	40-160			
Chloroform	47.8	4.00	ug/L	50.0		95.6	70-135			
Chloromethane	44.1	5.00	ug/L	50.0		88.2	1-205			
Dibromochloromethane	47.6	5.00	ug/L	50.0		95.2	70-135			
Dibromomethane (Methylene bromide)	47.7	5.00	ug/L	50.0		95.4	73.8-124			
1,2-Dichlorobenzene	44.5	5.00	ug/L	50.0		89.0	65-135			
1,3-Dichlorobenzene	44.5	5.00	ug/L	50.0		88.9	70-130			
1,4-Dichlorobenzene	43.8	5.00	ug/L	50.0		87.5	65-135			
Dichlorodifluoromethane (Freon-12)	41.9	5.00	ug/L	50.0		83.8	34.7-129			
1,2-Dichloroethane	48.4	5.00	ug/L	50.0		96.9	70-130			
1,1-Dichloroethane	44.6	5.00	ug/L	50.0		89.1	70-130			
cis-1,2-Dichloroethene	44.4	5.00	ug/L	50.0		88.8	75.5-125			
1,1-Dichloroethene	42.3	5.00	ug/L	50.0		84.6	50-150			
trans-1,2-Dichloroethene	49.3	4.00	ug/L	50.0		98.5	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
LCS (DA11220-BS1)				Prepared & Analyzed: 01/20/2021						
1,2-Dichloropropane	45.6	5.00	ug/L	50.0		91.2	35-165			
cis-1,3-Dichloropropene	49.3	5.00	ug/L	50.0		98.6	25-175			
trans-1,3-Dichloropropene	46.0	5.00	ug/L	50.0		91.9	50-150			
Ethylbenzene	45.7	5.00	ug/L	50.0		91.5	60-140			
2-Hexanone (MBK)	39.7	10.0	ug/L	50.0		79.4	73.6-130			
Methyl tert-butyl ether (MTBE)	42.9	5.00	ug/L	50.0		85.7	69-151			
Methylene chloride (Dichloromethane)	47.5	1.00	ug/L	50.0		95.0	60-140			
4-Methyl-2-pentanone (MIBK)	38.8	10.0	ug/L	50.0		77.7	72.5-129			
Styrene	49.9	5.00	ug/L	50.0		99.8	79.2-127			
1,1,2,2-Tetrachloroethane	50.5	5.00	ug/L	50.0		101	60-140			
Tetrachloroethene	46.2	5.00	ug/L	50.0		92.5	70-130			
Toluene	45.7	5.00	ug/L	50.0		91.5	70-130			
1,1,2-Trichloroethane	45.7	5.00	ug/L	50.0		91.4	70-130			
1,1,1-Trichloroethane	47.3	5.00	ug/L	50.0		94.6	70-130			
Trichloroethene	48.2	5.00	ug/L	50.0		96.4	65-135			
Trichlorofluoromethane (Freon 11)	35.8	5.00	ug/L	50.0		71.6	50-150			
Vinyl chloride	44.6	5.00	ug/L	50.0		89.2	5-195			
m,p-Xylene	98.6	10.0	ug/L	100		98.6	77.1-129			
o-Xylene	47.1	5.00	ug/L	50.0		94.3	78.8-126			
Vinyl acetate	42.5	5.00	ug/L	50.0		85.1	60-140			
Surrogate: 1,2-Dichloroethane-d4	*47.6*		ug/L	*50.0*		*95.2*	*70-130*			
Surrogate: Toluene-d8	*49.8*		ug/L	*50.0*		*99.6*	*70-130*			
Surrogate: Pentafluorobenzene	*51.6*		ug/L	*50.0*		*103*	*70-130*			
Matrix Spike (DA11220-MS1)	**Source: D1A1229-01**			Prepared & Analyzed: 01/21/2021						
Acetone	32.1	10.0	ug/L	50.0	ND	64.2	0-200			
Acrylonitrile	43.2	20.0	ug/L	50.0	ND	86.4	40-160			
Benzene	51.1	5.00	ug/L	50.0	ND	102	37-151			
Bromodichloromethane	47.7	5.00	ug/L	50.0	ND	95.4	35-155			
Bromoform	45.5	5.00	ug/L	50.0	ND	91.0	45-169			
Bromomethane	47.8	5.00	ug/L	50.0	ND	95.6	1-242			
2-Butanone (MEK)	37.3	10.0	ug/L	50.0	ND	74.6	0-200			
Carbon disulfide	46.0	5.00	ug/L	50.0	ND	92.0	0-200			
Carbon tetrachloride	54.5	5.00	ug/L	50.0	ND	109	70-140			
Chlorobenzene	49.6	5.00	ug/L	50.0	ND	99.3	37-160			
Chloroethane (Ethyl chloride)	41.4	5.00	ug/L	50.0	ND	82.8	14-230			
Chloroform	51.4	4.00	ug/L	50.0	ND	103	51-138			
Chloromethane	54.1	5.00	ug/L	50.0	ND	108	1-273			
Dibromochloromethane	46.8	5.00	ug/L	50.0	ND	93.7	53-149			
Dibromomethane (Methylene bromide)	48.5	5.00	ug/L	50.0	ND	96.9	0-200			
1,2-Dichlorobenzene	44.3	5.00	ug/L	50.0	ND	88.7	18-190			
1,3-Dichlorobenzene	44.7	5.00	ug/L	50.0	ND	89.3	59-156			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
Matrix Spike (DA11220-MS1)	**Source: D1A1229-01**		Prepared & Analyzed: 01/21/2021							
1,4-Dichlorobenzene	42.2	5.00	ug/L	50.0	ND	84.4	18-190			
Dichlorodifluoromethane (Freon-12)	51.1	5.00	ug/L	50.0	ND	102	0-200			
1,2-Dichloroethane	50.3	5.00	ug/L	50.0	ND	101	49-155			
1,1-Dichloroethane	49.3	5.00	ug/L	50.0	ND	98.5	59-155			
cis-1,2-Dichloroethene	47.2	5.00	ug/L	50.0	ND	94.4	0-200			
1,1-Dichloroethene	47.8	5.00	ug/L	50.0	ND	95.6	1-234			
trans-1,2-Dichloroethene	53.0	4.00	ug/L	50.0	ND	106	54-156			
1,2-Dichloropropane	48.0	5.00	ug/L	50.0	ND	95.9	1-210			
cis-1,3-Dichloropropene	47.6	5.00	ug/L	50.0	ND	95.1	1-227			
trans-1,3-Dichloropropene	45.1	5.00	ug/L	50.0	ND	90.2	17-183			
Ethylbenzene	49.3	5.00	ug/L	50.0	ND	98.6	37-162			
2-Hexanone (MBK)	38.1	10.0	ug/L	50.0	ND	76.1	0-200			
Methyl tert-butyl ether (MTBE)	42.2	5.00	ug/L	50.0	ND	84.4	0-200			
Methylene chloride (Dichloromethane)	50.5	1.00	ug/L	50.0	ND	101	1-221			
4-Methyl-2-pentanone (MIBK)	38.3	10.0	ug/L	50.0	ND	76.5	0-200			
Styrene	52.3	5.00	ug/L	50.0	ND	105	0-200			
1,1,2,2-Tetrachloroethane	55.4	5.00	ug/L	50.0	ND	111	46-157			
Tetrachloroethene	49.1	5.00	ug/L	50.0	ND	98.2	64-148			
Toluene	49.1	5.00	ug/L	50.0	ND	98.2	47-150			
1,1,2-Trichloroethane	46.1	5.00	ug/L	50.0	ND	92.2	52-150			
1,1,1-Trichloroethane	53.6	5.00	ug/L	50.0	ND	107	52-162			
Trichloroethene	49.4	5.00	ug/L	50.0	ND	98.7	70-157			
Trichlorofluoromethane (Freon 11)	41.2	5.00	ug/L	50.0	ND	82.3	17-181			
Vinyl chloride	50.9	5.00	ug/L	50.0	ND	102	1-251			
m,p-Xylene	106	10.0	ug/L	100	ND	106	0-200			
o-Xylene	49.7	5.00	ug/L	50.0	ND	99.4	0-200			
Vinyl acetate	56.2	5.00	ug/L	50.0	ND	112	60-140			
Surrogate: 1,2-Dichloroethane-d4	*48.4*		ug/L	*50.0*		*96.8*	*70-130*			
Surrogate: Toluene-d8	*48.5*		ug/L	*50.0*		*96.9*	*70-130*			
Surrogate: Pentafluorobenzene	*53.2*		ug/L	*50.0*		*106*	*70-130*			
Matrix Spike Dup (DA11220-MSD1)	**Source: D1A1229-01**		Prepared & Analyzed: 01/21/2021							
Acetone	32.3	10.0	ug/L	50.0	ND	64.7	0-200	0.652	200	
Acrylonitrile	41.1	20.0	ug/L	50.0	ND	82.2	40-160	5.03	60	
Benzene	48.5	5.00	ug/L	50.0	ND	97.0	37-151	5.10	61	
Bromodichloromethane	45.0	5.00	ug/L	50.0	ND	90.0	35-155	5.83	56	
Bromoform	43.5	5.00	ug/L	50.0	ND	86.9	45-169	4.61	42	
Bromomethane	46.9	5.00	ug/L	50.0	ND	93.8	1-242	1.84	61	
2-Butanone (MEK)	38.6	10.0	ug/L	50.0	ND	77.2	0-200	3.32	200	
Carbon disulfide	43.3	5.00	ug/L	50.0	ND	86.6	0-200	6.05	200	
Carbon tetrachloride	49.9	5.00	ug/L	50.0	ND	99.8	70-140	8.72	41	
Chlorobenzene	45.8	5.00	ug/L	50.0	ND	91.5	37-160	8.11	53	
Chloroethane (Ethyl chloride)	37.9	5.00	ug/L	50.0	ND	75.7	14-230	8.96	78	

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
Matrix Spike Dup (DA11220-MSD1)	**Source: D1A1229-01**		Prepared & Analyzed: 01/21/2021							
Chloroform	48.9	4.00	ug/L	50.0	ND	97.8	51-138	5.00	54	
Chloromethane	51.6	5.00	ug/L	50.0	ND	103	1-273	4.84	60	
Dibromochloromethane	44.9	5.00	ug/L	50.0	ND	89.8	53-149	4.21	50	
Dibromomethane (Methylene bromide)	47.2	5.00	ug/L	50.0	ND	94.5	0-200	2.59	200	
1,2-Dichlorobenzene	41.5	5.00	ug/L	50.0	ND	83.0	18-190	6.57	57	
1,3-Dichlorobenzene	42.1	5.00	ug/L	50.0	ND	84.2	59-156	5.88	43	
1,4-Dichlorobenzene	40.8	5.00	ug/L	50.0	ND	81.7	18-190	3.23	57	
Dichlorodifluoromethane (Freon-12)	49.4	5.00	ug/L	50.0	ND	98.7	0-200	3.39	200	
1,2-Dichloroethane	49.3	5.00	ug/L	50.0	ND	98.5	49-155	2.09	49	
1,1-Dichloroethane	45.1	5.00	ug/L	50.0	ND	90.2	59-155	8.84	40	
cis-1,2-Dichloroethene	43.8	5.00	ug/L	50.0	ND	87.5	0-200	7.52	200	
1,1-Dichloroethene	45.1	5.00	ug/L	50.0	ND	90.2	1-234	5.83	32	
trans-1,2-Dichloroethene	49.0	4.00	ug/L	50.0	ND	98.1	54-156	7.78	45	
1,2-Dichloropropane	46.4	5.00	ug/L	50.0	ND	92.7	1-210	3.44	55	
cis-1,3-Dichloropropene	45.2	5.00	ug/L	50.0	ND	90.4	1-227	5.11	58	
trans-1,3-Dichloropropene	42.9	5.00	ug/L	50.0	ND	85.8	17-183	5.02	86	
Ethylbenzene	45.2	5.00	ug/L	50.0	ND	90.5	37-162	8.61	63	
2-Hexanone (MBK)	37.1	10.0	ug/L	50.0	ND	74.3	0-200	2.45	200	
Methyl tert-butyl ether (MTBE)	41.5	5.00	ug/L	50.0	ND	83.0	0-200	1.74	200	
Methylene chloride (Dichloromethane)	47.4	1.00	ug/L	50.0	ND	94.7	1-221	6.50	28	
4-Methyl-2-pentanone (MIBK)	36.0	10.0	ug/L	50.0	ND	71.9	0-200	6.23	200	
Styrene	48.5	5.00	ug/L	50.0	ND	96.9	0-200	7.58	200	
1,1,2,2-Tetrachloroethane	52.1	5.00	ug/L	50.0	ND	104	46-157	6.25	61	
Tetrachloroethene	45.8	5.00	ug/L	50.0	ND	91.7	64-148	6.85	39	
Toluene	44.8	5.00	ug/L	50.0	ND	89.6	47-150	9.18	41	
1,1,2-Trichloroethane	42.8	5.00	ug/L	50.0	ND	85.5	52-150	7.56	45	
1,1,1-Trichloroethane	51.1	5.00	ug/L	50.0	ND	102	52-162	4.93	36	
Trichloroethene	45.8	5.00	ug/L	50.0	ND	91.5	70-157	7.59	48	
Trichlorofluoromethane (Freon 11)	38.7	5.00	ug/L	50.0	ND	77.4	17-181	6.11	84	
Vinyl chloride	47.7	5.00	ug/L	50.0	ND	95.3	1-251	6.65	66	
m,p-Xylene	97.1	10.0	ug/L	100	ND	97.1	0-200	8.40	200	
o-Xylene	46.4	5.00	ug/L	50.0	ND	92.9	0-200	6.78	200	
Vinyl acetate	55.1	5.00	ug/L	50.0	ND	110	60-140	2.08	25	
Surrogate: 1,2-Dichloroethane-d4	*49.6*		ug/L	*50.0*		*99.2*	*70-130*			
Surrogate: Toluene-d8	*48.7*		ug/L	*50.0*		*97.4*	*70-130*			
Surrogate: Pentafluorobenzene	*52.2*		ug/L	*50.0*		*104*	*70-130*			

MICROBAC®

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A1283

Definitions

MCL:	US EPA Maximum Contaminant Level
mg CaCO3/L	Milligrams Calcium Carbonate per Liter
mg/L:	Milligrams per Liter
R3:	Duplicate RPD is outside of acceptance criteria. The difference between the results is less than 2x Method Reporting Limit.
RL:	Reporting Limit
RPD:	Relative Percent Difference
ug/L:	Micrograms per Liter
Y1:	Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.3ºC

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008	Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:

M Montgomery

Melisa L. Montgomery
Quality Assurance Officer
Reported: 01/22/2021 16:04

MICROBAC

Cl
61 Loui
Tel: (8

D 1 A 1 2 8 3

W & C - Plymouth

Microbac Laboratories, Inc.

FOR LAB USE ONLY

Lab WO#

Project Manager

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
DELIVERY: ROBERT SCOTT
E-MAIL: [redacted]
PHONE: 508-830-4159 FAX: 508-732-0238

BILL TO: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DR.
PLYMOUTH, Ma
PURCHASE ORDER #
ATTENTION: ACCOUNTS PAYABLE
PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP
LOCATION: ID 11773
WELLS - QUARTERLY
ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL
ROBERT SCOTT
PHONE: CELL - 860-204-7988
FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # (250 mL)	1/14/21	838		X	WW	1	X	X											X			
Well # (500 mL)				X	WW	x			X	X		x						X				
Well # (250 mL)(filtered)				X	WW	1					X							X				
Well # (250 mL)				X	WW	1												X				
Well # (500 mL)				X	WW	1							X					X				
Well # (250 mL)				X	WW	1								X	X	X					X	
Well # (40 mL vial)				X	WW	2											X	X				
Well # (40 mL vial)	1/14/21	838		X	WW	2											X			X		
									PRESERVATIVE VERIFIED													

CUSTODY TRANSFER	DATE	TIME
SAMPLER:		
RECEIVED:		
RELINQUISHED:	1/14/21	1350
CEIVED:	1.14.2021	1350
LINQUISHED:	1.14.2021	1735
CEIVED:	1-14-21	1735

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☐ AMBIENT ☐ 3-3°C (IR)

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A1285

Project Description

Wells - Quarterly

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Friday, January 22, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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CERTIFICATE OF ANALYSIS

D1A1285

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Quarterly

Project / PO Number: 346346
Received: 01/14/2021
Reported: 01/22/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well A16	D1A1285-01	Groundwater	Grab		01/14/21 12:15	01/14/21 17:35
Well A16	D1A1285-02	Groundwater	Grab		01/14/21 12:15	01/14/21 17:35
Well A16 (filtered)	D1A1285-03	Groundwater	Grab		01/14/21 12:15	01/14/21 17:35
Well A16	D1A1285-04	Groundwater	Grab		01/14/21 12:15	01/14/21 17:35
Well A16	D1A1285-05	Groundwater	Grab		01/14/21 12:15	01/14/21 17:35
Well A16	D1A1285-06	Groundwater	Grab		01/14/21 12:15	01/14/21 17:35
Well A16	D1A1285-07	Groundwater	Grab		01/14/21 12:15	01/14/21 17:35
Well A16	D1A1285-08	Groundwater	Grab		01/14/21 12:15	01/14/21 17:35

CERTIFICATE OF ANALYSIS

D1A1285

Analytical Testing Parameters

Client Sample ID: Well A16
Sample Matrix: Groundwater
Lab Sample ID: D1A1285-01
Collected By: Customer
Collection Date: 01/14/2021 12:15

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 351.1								
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L	1		01/20/21 1356	01/21/21 1602	CLW
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	<0.0106	0.0106	mg/L	1		01/18/21 1619	01/19/21 1044	CLW

Client Sample ID: Well A16
Sample Matrix: Groundwater
Lab Sample ID: D1A1285-02
Collected By: Customer
Collection Date: 01/14/2021 12:15

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-NO_3^- F-2011								
Nitrate as N	**0.459**	0.0500	mg/L	1			01/14/21 2032	DJM
Nitrite as N	<0.0100	0.0100	mg/L	1	**Y1**		01/14/21 2032	DJM

Client Sample ID: Well A16 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1A1285-03
Collected By: Customer
Collection Date: 01/14/2021 12:15

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0170**	0.0100	mg/L	1		01/14/21 1753	01/14/21 1908	DJM

Client Sample ID: Well A16
Sample Matrix: Groundwater
Lab Sample ID: D1A1285-04
Collected By: Customer
Collection Date: 01/14/2021 12:15

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 2320 B-2011								
Alkalinity to pH 4.5	**8.50**	1.00	mg CaCO3/L	1			01/16/21 1538	MAD

CERTIFICATE OF ANALYSIS

D1A1285

Client Sample ID:	Well A16		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A1285-05	**Collection Date:**	01/14/2021 12:15

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-Cl E-2011								
Chloride	**114**	4.00	mg/L	2			01/18/21 1639	CLW

Client Sample ID:	Well A16		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A1285-06	**Collection Date:**	01/14/2021 12:15

Metals Total by ICP	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.7, Rv. 4.4 (1994)								
Boron	**0.0175**	0.0050	mg/L	1	**Y1**	01/18/21 1333	01/20/21 1316	JDF
Copper	<0.0020	0.0020	mg/L	1		01/18/21 1333	01/19/21 1612	JDF
Sodium	**52.2**	1.00	mg/L	1		01/18/21 1333	01/19/21 1612	JDF

Client Sample ID:	Well A16		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A1285-07	**Collection Date:**	01/14/2021 12:15

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acrolein	<20.0	20.0	ug/L	1			01/15/21 1505	JAN
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	1			01/15/21 1505	JAN
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 70-130	% Rec	1			01/15/21 1505	JAN
Surrogate: Toluene-d8	101	Limit: 70-130	% Rec	1			01/15/21 1505	JAN
Surrogate: Pentafluorobenzene	85.0	Limit: 70-130	% Rec	1			01/15/21 1505	JAN

CERTIFICATE OF ANALYSIS

D1A1285

Client Sample ID:	Well A16		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A1285-08	**Collection Date:**	01/14/2021 12:15

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acetone	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0224	JAN
Acrylonitrile	<20.0	20.0	ug/L	1			01/21/21 0224	JAN
Benzene	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
Bromodichloromethane	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
Bromoform	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
Bromomethane	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
2-Butanone (MEK)	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0224	JAN
Carbon disulfide	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0224	JAN
Carbon tetrachloride	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
Chlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
Chloroform	<4.00	4.00	ug/L	1			01/21/21 0224	JAN
Chloromethane	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
Dibromochloromethane	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0224	JAN
1,2-Dichlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
1,3-Dichlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
1,4-Dichlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0224	JAN
1,2-Dichloroethane	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
1,1-Dichloroethane	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
cis-1,2-Dichloroethene	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0224	JAN
1,1-Dichloroethene	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
trans-1,2-Dichloroethene	<4.00	4.00	ug/L	1			01/21/21 0224	JAN
1,2-Dichloropropane	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
cis-1,3-Dichloropropene	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
trans-1,3-Dichloropropene	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
Ethylbenzene	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
2-Hexanone (MBK)	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0224	JAN
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0224	JAN
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L	1			01/21/21 0224	JAN
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0224	JAN
Styrene	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0224	JAN
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
Tetrachloroethene	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
Toluene	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
1,1,2-Trichloroethane	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
1,1,1-Trichloroethane	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
Trichloroethene	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
Vinyl chloride	<5.00	5.00	ug/L	1			01/21/21 0224	JAN
m,p-Xylene	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0224	JAN

CERTIFICATE OF ANALYSIS

D1A1285

Client Sample ID:	Well A16		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A1285-08	**Collection Date:**	01/14/2021 12:15

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
o-Xylene	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0224	JAN
Vinyl acetate	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0224	JAN
Surrogate: 1,2-Dichloroethane-d4	106	Limit: 70-130	% Rec	1			01/21/21 0224	JAN
Surrogate: Toluene-d8	104	Limit: 70-130	% Rec	1			01/21/21 0224	JAN
Surrogate: Pentafluorobenzene	102	Limit: 70-130	% Rec	1			01/21/21 0224	JAN

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DA10785	DA10785-BS1	
		DA10785-BLK1	
		D1A1285-03	Well A16 (filtered)
		DA10785-MS1	D1A1285-03
		DA10785-DUP1	D1A1285-03
		DA10785-MS2	D1A1288-03

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-$NO3^{-}$ F-2011	DA10796	DA10796-DUP1	D1A1281-02
		DA10796-DUP1	D1A1281-02
		DA10796-MS1	D1A1281-02
		DA10796-MS1	D1A1281-02
		DA10796-MSD1	D1A1281-02
		DA10796-MSD1	D1A1281-02
		D1A1285-02	Well A16
		D1A1285-02	Well A16
		DA10796-BS1	
		DA10796-BS2	
		DA10796-BLK1	
		DA10796-BLK1	

Method	Batch	Laboratory ID	Client / Source ID
SM 2320 B-2011	DA10887	D1A1285-04	Well A16
		DA10887-BLK1	
		DA10887-DUP1	D1A1281-04
		DA10887-BS1	

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-Cl E-2011	DA10893	DA10893-BS1	
		DA10893-BLK1	
		DA10893-DUP1	D1A1288-05
		DA10893-MS1	D1A1288-05
		DA10893-MSD1	D1A1288-05
		D1A1285-05	Well A16

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.7, Rv. 4.4 (1994)	DA10898	DA10898-BLK1	
		DA10898-BS1	
		DA10898-DUP1	D1A1338-01
		DA10898-MS1	D1A1338-01
		D1A1285-06	Well A16

EPA 200.7, Rv. 4.4 (1994)	DA10898	D1A1285-06	Well A16
		DA10898-MS2	D1A1381-02
		DA10898-BLK2	
		DA10898-BS2	
		DA10898-DUP2	D1A1338-01
		DA10898-MS3	D1A1338-01
		D1A1285-06	Well A16
		DA10898-MS4	D1A1338-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DA10901	DA10901-BS1	
		DA10901-BLK1	
		DA10901-MS1	L1A0201-01
		DA10901-DUP1	L1A0201-01
		DA10901-MS2	L1A0192-02
		D1A1285-01	Well A16

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DA11074	DA11074-BS1	
		DA11074-BLK1	
		D1A1285-07	Well A16
		DA11074-MS1	D1A1281-07
		DA11074-MSD1	D1A1281-07

Method	Batch	Laboratory ID	Client / Source ID
EPA 351.1	DA11085	DA11085-BS1	
		DA11085-BLK1	
		DA11085-DUP1	D1A1379-04
		DA11085-MS1	D1A1379-04
		D1A1285-01	Well A16
		DA11085-MS2	D1A1396-07

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DA11220	DA11220-BS1	
		DA11220-BLK1	
		D1A1285-08	Well A16
		DA11220-MS1	D1A1229-01
		DA11220-MSD1	D1A1229-01

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10785 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10785-BLK1)	Prepared & Analyzed: 01/14/2021									

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10785 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10785-BLK1)			Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DA10785-BS1)			Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.974	0.0100	mg/L	1.00		97.3	90-110			
Duplicate (DA10785-DUP1)		**Source: D1A1285-03**	Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.0150	0.0100	mg/L		0.0170			12.5	20	
Matrix Spike (DA10785-MS1)		**Source: D1A1285-03**	Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.981	0.0100	mg/L	1.00	0.0170	96.3	90-110			
Matrix Spike (DA10785-MS2)		**Source: D1A1288-03**	Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.997	0.0100	mg/L	1.00	0.0160	98.0	90-110			
Batch DA10796 - Wet Chem - W - SM 4500-NO_3^- F-2011										
Blank (DA10796-BLK1)			Prepared & Analyzed: 01/14/2021							
Nitrite as N	<0.0100	0.0100	mg/L							
Nitrate as N	<0.0500	0.0500	mg/L							
LCS (DA10796-BS1)			Prepared & Analyzed: 01/14/2021							
Nitrate as N	4.83	0.0500	mg/L	5.00		96.6	90-110			
LCS (DA10796-BS2)			Prepared & Analyzed: 01/14/2021							
Nitrite as N	1.01	0.0100	mg/L	1.00		101	90-110			
Duplicate (DA10796-DUP1)		**Source: D1A1281-02**	Prepared & Analyzed: 01/14/2021							
Nitrite as N	<0.0100	0.0100	mg/L		ND				20	
Nitrate as N	1.71	0.0500	mg/L		1.72			0.117	20	
Matrix Spike (DA10796-MS1)		**Source: D1A1281-02**	Prepared & Analyzed: 01/14/2021							
Nitrite as N	1.08	0.0100	mg/L	1.00	ND	108	75-125			
Nitrate as N	6.42	0.0500	mg/L	5.00	1.72	94.1	75-125			
Matrix Spike Dup (DA10796-MSD1)		**Source: D1A1281-02**	Prepared & Analyzed: 01/14/2021							
Nitrite as N	1.06	0.0100	mg/L	1.00	ND	106	75-125	1.43	20	
Nitrate as N	6.40	0.0500	mg/L	5.00	1.72	93.7	75-125	0.307	20	
Batch DA10887 - Wet Chem - W - SM 2320 B-2011										
Blank (DA10887-BLK1)			Prepared & Analyzed: 01/16/2021							
Alkalinity to pH 4.5	<1.00	1.00	mg CaCO3/L							
LCS (DA10887-BS1)			Prepared & Analyzed: 01/16/2021							
Alkalinity to pH 4.5	50.0	1.00	mg CaCO3/L	50.0		100	90-110			
Duplicate (DA10887-DUP1)		**Source: D1A1281-04**	Prepared & Analyzed: 01/16/2021							
Alkalinity to pH 4.5	5.00	1.00	mg CaCO3/L		4.50			10.5	20	

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10893 - Wet Chem - W - SM 4500-Cl E-2011										
Blank (DA10893-BLK1)			Prepared & Analyzed: 01/18/2021							
Chloride	<2.00	2.00	mg/L							
LCS (DA10893-BS1)			Prepared & Analyzed: 01/18/2021							
Chloride	19.5	2.00	mg/L	20.0		97.4	90-110			
Duplicate (DA10893-DUP1)		**Source: D1A1288-05**	Prepared & Analyzed: 01/18/2021							
Chloride	13.8	2.00	mg/L		13.8			0.0153	20	
Matrix Spike (DA10893-MS1)		**Source: D1A1288-05**	Prepared & Analyzed: 01/18/2021							
Chloride	34.2	2.00	mg/L	20.0	13.8	102	75-125			
Matrix Spike Dup (DA10893-MSD1)		**Source: D1A1288-05**	Prepared & Analyzed: 01/18/2021							
Chloride	34.6	2.00	mg/L	20.0	13.8	104	75-125	0.964	20	
Batch DA10901 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10901-BLK1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DA10901-BS1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	1.02	0.0106	mg/L	1.00		102	90-110			
Duplicate (DA10901-DUP1)		**Source: L1A0201-01**	Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	0.590	0.0106	mg/L		0.583			1.09	20	
Matrix Spike (DA10901-MS1)		**Source: L1A0201-01**	Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	1.87	0.0106	mg/L	1.25	0.583	103	90-110			
Matrix Spike (DA10901-MS2)		**Source: L1A0192-02**	Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	1.42	0.0106	mg/L	1.25	0.216	96.0	90-110			
Batch DA11085 - Wet-Digestion-W - EPA 351.1										
Blank (DA11085-BLK1)			Prepared: 01/20/2021 Analyzed: 01/21/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L							
LCS (DA11085-BS1)			Prepared: 01/20/2021 Analyzed: 01/21/2021							
Total Kjeldahl Nitrogen (TKN)	5.07	0.200	mg/L	5.00		101	90-110			
Duplicate (DA11085-DUP1)		**Source: D1A1379-04**	Prepared: 01/20/2021 Analyzed: 01/21/2021							
Total Kjeldahl Nitrogen (TKN)	5.05	0.200	mg/L		5.29			4.59	20	
Matrix Spike (DA11085-MS1)		**Source: D1A1379-04**	Prepared: 01/20/2021 Analyzed: 01/21/2021							
Total Kjeldahl Nitrogen (TKN)	15.9	0.200	mg/L	10.0	5.29	106	90-110			
Matrix Spike (DA11085-MS2)		**Source: D1A1396-07**	Prepared: 01/20/2021 Analyzed: 01/21/2021							
Total Kjeldahl Nitrogen (TKN)	22.9	0.400	mg/L	10.0	12.6	102	90-110			

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10898 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DA10898-BLK1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	<0.0020	0.0020	mg/L							
Sodium	<1.00	1.00	mg/L							

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10898 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DA10898-BLK2)			Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	<0.0050	0.0050	mg/L							
LCS (DA10898-BS1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.533	0.0020	mg/L	0.500		107	85-115			
Sodium	10.3	1.00	mg/L	10.5		97.9	85-115			
LCS (DA10898-BS2)			Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.523	0.0050	mg/L	0.500		105	85-115			
Duplicate (DA10898-DUP1)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.0045	0.0020	mg/L		0.0042			6.88	20	
Sodium	39.5	1.00	mg/L		39.1			0.946	20	
Duplicate (DA10898-DUP2)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.0660	0.0050	mg/L		0.0653			1.04	20	
Matrix Spike (DA10898-MS1)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.532	0.0020	mg/L	0.500	0.0042	106	70-130			
Sodium	50.0	1.00	mg/L	10.5	39.1	104	70-130			
Matrix Spike (DA10898-MS2)	**Source: D1A1381-02**		Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.549	0.0020	mg/L	0.500	0.0155	107	70-130			
Sodium	216	1.00	mg/L	10.5	207	79.1	70-130			
Matrix Spike (DA10898-MS3)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.576	0.0050	mg/L	0.500	0.0653	102	70-130			
Matrix Spike (DA10898-MS4)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.619	0.0050	mg/L	0.500	0.0653	111	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11074 - 624.1 - EPA 624.1										
Blank (DA11074-BLK1)			Prepared & Analyzed: 01/15/2021							
Acrolein	<20.0	20.0	ug/L							
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*49.4*		ug/L	*50.0*		*98.8*	*70-130*			
Surrogate: Toluene-d8	*50.0*		ug/L	*50.0*		*100*	*70-130*			
Surrogate: Pentafluorobenzene	*42.3*		ug/L	*50.0*		*84.6*	*70-130*			
LCS (DA11074-BS1)			Prepared & Analyzed: 01/15/2021							
Acrolein	34.1	20.0	ug/L	50.0		68.2	60-140			
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0		21.6	1-305			
Surrogate: 1,2-Dichloroethane-d4	*49.3*		ug/L	*50.0*		*98.6*	*70-130*			
Surrogate: Toluene-d8	*50.8*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Pentafluorobenzene	*42.5*		ug/L	*50.0*		*84.9*	*70-130*			
Matrix Spike (DA11074-MS1)	**Source: D1A1281-07**		Prepared & Analyzed: 01/15/2021							
Acrolein	30.3	20.0	ug/L	50.0	ND	60.7	40-160			
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0	ND	19.9	1-305			
Surrogate: 1,2-Dichloroethane-d4	*48.7*		ug/L	*50.0*		*97.4*	*70-130*			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11074 - 624.1 - EPA 624.1										
Matrix Spike (DA11074-MS1)	**Source: D1A1281-07**		Prepared & Analyzed: 01/15/2021							
Surrogate: Toluene-d8	*50.5*		ug/L	*50.0*		*101*	*70-130*			
Surrogate: Pentafluorobenzene	*43.9*		ug/L	*50.0*		*87.7*	*70-130*			
Matrix Spike Dup (DA11074-MSD1)	**Source: D1A1281-07**		Prepared & Analyzed: 01/15/2021							
Acrolein	31.2	20.0	ug/L	50.0	ND	62.3	40-160	2.63	60	
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0	ND	20.5	1-305	2.97	71	
Surrogate: 1,2-Dichloroethane-d4	*50.0*		ug/L	*50.0*		*100*	*70-130*			
Surrogate: Toluene-d8	*50.9*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Pentafluorobenzene	*42.9*		ug/L	*50.0*		*85.8*	*70-130*			
Batch DA11220 - 624.1 - EPA 624.1										
Blank (DA11220-BLK1)			Prepared & Analyzed: 01/20/2021							
Acetone	<10.0	10.0	ug/L							
Acrylonitrile	<20.0	20.0	ug/L							
Benzene	<5.00	5.00	ug/L							
Bromodichloromethane	<5.00	5.00	ug/L							
Bromoform	<5.00	5.00	ug/L							
Bromomethane	<5.00	5.00	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Carbon disulfide	<5.00	5.00	ug/L							
Carbon tetrachloride	<5.00	5.00	ug/L							
Chlorobenzene	<5.00	5.00	ug/L							
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L							
Chloroform	<4.00	4.00	ug/L							
Chloromethane	<5.00	5.00	ug/L							
Dibromochloromethane	<5.00	5.00	ug/L							
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L							
1,2-Dichlorobenzene	<5.00	5.00	ug/L							
1,3-Dichlorobenzene	<5.00	5.00	ug/L							
1,4-Dichlorobenzene	<5.00	5.00	ug/L							
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L							
1,2-Dichloroethane	<5.00	5.00	ug/L							
1,1-Dichloroethane	<5.00	5.00	ug/L							
cis-1,2-Dichloroethene	<5.00	5.00	ug/L							
1,1-Dichloroethene	<5.00	5.00	ug/L							
trans-1,2-Dichloroethene	<4.00	4.00	ug/L							
1,2-Dichloropropane	<5.00	5.00	ug/L							
cis-1,3-Dichloropropene	<5.00	5.00	ug/L							
trans-1,3-Dichloropropene	<5.00	5.00	ug/L							
Ethylbenzene	<5.00	5.00	ug/L							
2-Hexanone (MBK)	<10.0	10.0	ug/L							
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
Blank (DA11220-BLK1)			Prepared & Analyzed: 01/20/2021							
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L							
Styrene	<5.00	5.00	ug/L							
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L							
Tetrachloroethene	<5.00	5.00	ug/L							
Toluene	<5.00	5.00	ug/L							
1,1,2-Trichloroethane	<5.00	5.00	ug/L							
1,1,1-Trichloroethane	<5.00	5.00	ug/L							
Trichloroethene	<5.00	5.00	ug/L							
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L							
Vinyl chloride	<5.00	5.00	ug/L							
m,p-Xylene	<10.0	10.0	ug/L							
o-Xylene	<5.00	5.00	ug/L							
Vinyl acetate	<5.00	5.00	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*52.5*		ug/L	*50.0*		*105*	*70-130*			
Surrogate: Toluene-d8	*51.7*		ug/L	*50.0*		*103*	*70-130*			
LCS (DA11220-BS1)			Prepared & Analyzed: 01/20/2021							
Acetone	31.9	10.0	ug/L	50.0		63.8	42.1-136			
Acrylonitrile	42.2	20.0	ug/L	50.0		84.4	60-140			
Benzene	46.1	5.00	ug/L	50.0		92.3	65-135			
Bromodichloromethane	44.8	5.00	ug/L	50.0		89.6	65-135			
Bromoform	47.3	5.00	ug/L	50.0		94.6	70-130			
Bromomethane	42.6	5.00	ug/L	50.0		85.1	15-185			
2-Butanone (MEK)	35.5	10.0	ug/L	50.0		71.0	63.1-143			
Carbon disulfide	42.6	5.00	ug/L	50.0		85.2	63.5-124			
Carbon tetrachloride	46.9	5.00	ug/L	50.0		93.7	70-130			
Chlorobenzene	47.3	5.00	ug/L	50.0		94.6	65-135			
Chloroethane (Ethyl chloride)	37.2	5.00	ug/L	50.0		74.5	40-160			
Chloroform	47.8	4.00	ug/L	50.0		95.6	70-135			
Chloromethane	44.1	5.00	ug/L	50.0		88.2	1-205			
Dibromochloromethane	47.6	5.00	ug/L	50.0		95.2	70-135			
Dibromomethane (Methylene bromide)	47.7	5.00	ug/L	50.0		95.4	73.8-124			
1,2-Dichlorobenzene	44.5	5.00	ug/L	50.0		89.0	65-135			
1,3-Dichlorobenzene	44.5	5.00	ug/L	50.0		88.9	70-130			
1,4-Dichlorobenzene	43.8	5.00	ug/L	50.0		87.5	65-135			
Dichlorodifluoromethane (Freon-12)	41.9	5.00	ug/L	50.0		83.8	34.7-129			
1,2-Dichloroethane	48.4	5.00	ug/L	50.0		96.9	70-130			
1,1-Dichloroethane	44.6	5.00	ug/L	50.0		89.1	70-130			
cis-1,2-Dichloroethene	44.4	5.00	ug/L	50.0		88.8	75.5-125			
1,1-Dichloroethene	42.3	5.00	ug/L	50.0		84.6	50-150			
trans-1,2-Dichloroethene	49.3	4.00	ug/L	50.0		98.5	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
LCS (DA11220-BS1)				Prepared & Analyzed: 01/20/2021						
1,2-Dichloropropane	45.6	5.00	ug/L	50.0		91.2	35-165			
cis-1,3-Dichloropropene	49.3	5.00	ug/L	50.0		98.6	25-175			
trans-1,3-Dichloropropene	46.0	5.00	ug/L	50.0		91.9	50-150			
Ethylbenzene	45.7	5.00	ug/L	50.0		91.5	60-140			
2-Hexanone (MBK)	39.7	10.0	ug/L	50.0		79.4	73.6-130			
Methyl tert-butyl ether (MTBE)	42.9	5.00	ug/L	50.0		85.7	69-151			
Methylene chloride (Dichloromethane)	47.5	1.00	ug/L	50.0		95.0	60-140			
4-Methyl-2-pentanone (MIBK)	38.8	10.0	ug/L	50.0		77.7	72.5-129			
Styrene	49.9	5.00	ug/L	50.0		99.8	79.2-127			
1,1,2,2-Tetrachloroethane	50.5	5.00	ug/L	50.0		101	60-140			
Tetrachloroethene	46.2	5.00	ug/L	50.0		92.5	70-130			
Toluene	45.7	5.00	ug/L	50.0		91.5	70-130			
1,1,2-Trichloroethane	45.7	5.00	ug/L	50.0		91.4	70-130			
1,1,1-Trichloroethane	47.3	5.00	ug/L	50.0		94.6	70-130			
Trichloroethene	48.2	5.00	ug/L	50.0		96.4	65-135			
Trichlorofluoromethane (Freon 11)	35.8	5.00	ug/L	50.0		71.6	50-150			
Vinyl chloride	44.6	5.00	ug/L	50.0		89.2	5-195			
m,p-Xylene	98.6	10.0	ug/L	100		98.6	77.1-129			
o-Xylene	47.1	5.00	ug/L	50.0		94.3	78.8-126			
Vinyl acetate	42.5	5.00	ug/L	50.0		85.1	60-140			
Surrogate: 1,2-Dichloroethane-d4	*47.6*		ug/L	*50.0*		*95.2*	*70-130*			
Surrogate: Toluene-d8	*49.8*		ug/L	*50.0*		*99.6*	*70-130*			
Surrogate: Pentafluorobenzene	*51.6*		ug/L	*50.0*		*103*	*70-130*			
Matrix Spike (DA11220-MS1)	**Source: D1A1229-01**			Prepared & Analyzed: 01/21/2021						
Acetone	32.1	10.0	ug/L	50.0	ND	64.2	0-200			
Acrylonitrile	43.2	20.0	ug/L	50.0	ND	86.4	40-160			
Benzene	51.1	5.00	ug/L	50.0	ND	102	37-151			
Bromodichloromethane	47.7	5.00	ug/L	50.0	ND	95.4	35-155			
Bromoform	45.5	5.00	ug/L	50.0	ND	91.0	45-169			
Bromomethane	47.8	5.00	ug/L	50.0	ND	95.6	1-242			
2-Butanone (MEK)	37.3	10.0	ug/L	50.0	ND	74.6	0-200			
Carbon disulfide	46.0	5.00	ug/L	50.0	ND	92.0	0-200			
Carbon tetrachloride	54.5	5.00	ug/L	50.0	ND	109	70-140			
Chlorobenzene	49.6	5.00	ug/L	50.0	ND	99.3	37-160			
Chloroethane (Ethyl chloride)	41.4	5.00	ug/L	50.0	ND	82.8	14-230			
Chloroform	51.4	4.00	ug/L	50.0	ND	103	51-138			
Chloromethane	54.1	5.00	ug/L	50.0	ND	108	1-273			
Dibromochloromethane	46.8	5.00	ug/L	50.0	ND	93.7	53-149			
Dibromomethane (Methylene bromide)	48.5	5.00	ug/L	50.0	ND	96.9	0-200			
1,2-Dichlorobenzene	44.3	5.00	ug/L	50.0	ND	88.7	18-190			
1,3-Dichlorobenzene	44.7	5.00	ug/L	50.0	ND	89.3	59-156			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
Matrix Spike (DA11220-MS1)	**Source: D1A1229-01**		Prepared & Analyzed: 01/21/2021							
1,4-Dichlorobenzene	42.2	5.00	ug/L	50.0	ND	84.4	18-190			
Dichlorodifluoromethane (Freon-12)	51.1	5.00	ug/L	50.0	ND	102	0-200			
1,2-Dichloroethane	50.3	5.00	ug/L	50.0	ND	101	49-155			
1,1-Dichloroethane	49.3	5.00	ug/L	50.0	ND	98.5	59-155			
cis-1,2-Dichloroethene	47.2	5.00	ug/L	50.0	ND	94.4	0-200			
1,1-Dichloroethene	47.8	5.00	ug/L	50.0	ND	95.6	1-234			
trans-1,2-Dichloroethene	53.0	4.00	ug/L	50.0	ND	106	54-156			
1,2-Dichloropropane	48.0	5.00	ug/L	50.0	ND	95.9	1-210			
cis-1,3-Dichloropropene	47.6	5.00	ug/L	50.0	ND	95.1	1-227			
trans-1,3-Dichloropropene	45.1	5.00	ug/L	50.0	ND	90.2	17-183			
Ethylbenzene	49.3	5.00	ug/L	50.0	ND	98.6	37-162			
2-Hexanone (MBK)	38.1	10.0	ug/L	50.0	ND	76.1	0-200			
Methyl tert-butyl ether (MTBE)	42.2	5.00	ug/L	50.0	ND	84.4	0-200			
Methylene chloride (Dichloromethane)	50.5	1.00	ug/L	50.0	ND	101	1-221			
4-Methyl-2-pentanone (MIBK)	38.3	10.0	ug/L	50.0	ND	76.5	0-200			
Styrene	52.3	5.00	ug/L	50.0	ND	105	0-200			
1,1,2,2-Tetrachloroethane	55.4	5.00	ug/L	50.0	ND	111	46-157			
Tetrachloroethene	49.1	5.00	ug/L	50.0	ND	98.2	64-148			
Toluene	49.1	5.00	ug/L	50.0	ND	98.2	47-150			
1,1,2-Trichloroethane	46.1	5.00	ug/L	50.0	ND	92.2	52-150			
1,1,1-Trichloroethane	53.6	5.00	ug/L	50.0	ND	107	52-162			
Trichloroethene	49.4	5.00	ug/L	50.0	ND	98.7	70-157			
Trichlorofluoromethane (Freon 11)	41.2	5.00	ug/L	50.0	ND	82.3	17-181			
Vinyl chloride	50.9	5.00	ug/L	50.0	ND	102	1-251			
m,p-Xylene	106	10.0	ug/L	100	ND	106	0-200			
o-Xylene	49.7	5.00	ug/L	50.0	ND	99.4	0-200			
Vinyl acetate	56.2	5.00	ug/L	50.0	ND	112	60-140			
Surrogate: 1,2-Dichloroethane-d4	*48.4*		ug/L	*50.0*		*96.8*	*70-130*			
Surrogate: Toluene-d8	*48.5*		ug/L	*50.0*		*96.9*	*70-130*			
Surrogate: Pentafluorobenzene	*53.2*		ug/L	*50.0*		*106*	*70-130*			
Matrix Spike Dup (DA11220-MSD1)	**Source: D1A1229-01**		Prepared & Analyzed: 01/21/2021							
Acetone	32.3	10.0	ug/L	50.0	ND	64.7	0-200	0.652	200	
Acrylonitrile	41.1	20.0	ug/L	50.0	ND	82.2	40-160	5.03	60	
Benzene	48.5	5.00	ug/L	50.0	ND	97.0	37-151	5.10	61	
Bromodichloromethane	45.0	5.00	ug/L	50.0	ND	90.0	35-155	5.83	56	
Bromoform	43.5	5.00	ug/L	50.0	ND	86.9	45-169	4.61	42	
Bromomethane	46.9	5.00	ug/L	50.0	ND	93.8	1-242	1.84	61	
2-Butanone (MEK)	38.6	10.0	ug/L	50.0	ND	77.2	0-200	3.32	200	
Carbon disulfide	43.3	5.00	ug/L	50.0	ND	86.6	0-200	6.05	200	
Carbon tetrachloride	49.9	5.00	ug/L	50.0	ND	99.8	70-140	8.72	41	
Chlorobenzene	45.8	5.00	ug/L	50.0	ND	91.5	37-160	8.11	53	
Chloroethane (Ethyl chloride)	37.9	5.00	ug/L	50.0	ND	75.7	14-230	8.96	78	

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
Matrix Spike Dup (DA11220-MSD1)	**Source: D1A1229-01**		Prepared & Analyzed: 01/21/2021							
Chloroform	48.9	4.00	ug/L	50.0	ND	97.8	51-138	5.00	54	
Chloromethane	51.6	5.00	ug/L	50.0	ND	103	1-273	4.84	60	
Dibromochloromethane	44.9	5.00	ug/L	50.0	ND	89.8	53-149	4.21	50	
Dibromomethane (Methylene bromide)	47.2	5.00	ug/L	50.0	ND	94.5	0-200	2.59	200	
1,2-Dichlorobenzene	41.5	5.00	ug/L	50.0	ND	83.0	18-190	6.57	57	
1,3-Dichlorobenzene	42.1	5.00	ug/L	50.0	ND	84.2	59-156	5.88	43	
1,4-Dichlorobenzene	40.8	5.00	ug/L	50.0	ND	81.7	18-190	3.23	57	
Dichlorodifluoromethane (Freon-12)	49.4	5.00	ug/L	50.0	ND	98.7	0-200	3.39	200	
1,2-Dichloroethane	49.3	5.00	ug/L	50.0	ND	98.5	49-155	2.09	49	
1,1-Dichloroethane	45.1	5.00	ug/L	50.0	ND	90.2	59-155	8.84	40	
cis-1,2-Dichloroethene	43.8	5.00	ug/L	50.0	ND	87.5	0-200	7.52	200	
1,1-Dichloroethene	45.1	5.00	ug/L	50.0	ND	90.2	1-234	5.83	32	
trans-1,2-Dichloroethene	49.0	4.00	ug/L	50.0	ND	98.1	54-156	7.78	45	
1,2-Dichloropropane	46.4	5.00	ug/L	50.0	ND	92.7	1-210	3.44	55	
cis-1,3-Dichloropropene	45.2	5.00	ug/L	50.0	ND	90.4	1-227	5.11	58	
trans-1,3-Dichloropropene	42.9	5.00	ug/L	50.0	ND	85.8	17-183	5.02	86	
Ethylbenzene	45.2	5.00	ug/L	50.0	ND	90.5	37-162	8.61	63	
2-Hexanone (MBK)	37.1	10.0	ug/L	50.0	ND	74.3	0-200	2.45	200	
Methyl tert-butyl ether (MTBE)	41.5	5.00	ug/L	50.0	ND	83.0	0-200	1.74	200	
Methylene chloride (Dichloromethane)	47.4	1.00	ug/L	50.0	ND	94.7	1-221	6.50	28	
4-Methyl-2-pentanone (MIBK)	36.0	10.0	ug/L	50.0	ND	71.9	0-200	6.23	200	
Styrene	48.5	5.00	ug/L	50.0	ND	96.9	0-200	7.58	200	
1,1,2,2-Tetrachloroethane	52.1	5.00	ug/L	50.0	ND	104	46-157	6.25	61	
Tetrachloroethene	45.8	5.00	ug/L	50.0	ND	91.7	64-148	6.85	39	
Toluene	44.8	5.00	ug/L	50.0	ND	89.6	47-150	9.18	41	
1,1,2-Trichloroethane	42.8	5.00	ug/L	50.0	ND	85.5	52-150	7.56	45	
1,1,1-Trichloroethane	51.1	5.00	ug/L	50.0	ND	102	52-162	4.93	36	
Trichloroethene	45.8	5.00	ug/L	50.0	ND	91.5	70-157	7.59	48	
Trichlorofluoromethane (Freon 11)	38.7	5.00	ug/L	50.0	ND	77.4	17-181	6.11	84	
Vinyl chloride	47.7	5.00	ug/L	50.0	ND	95.3	1-251	6.65	66	
m,p-Xylene	97.1	10.0	ug/L	100	ND	97.1	0-200	8.40	200	
o-Xylene	46.4	5.00	ug/L	50.0	ND	92.9	0-200	6.78	200	
Vinyl acetate	55.1	5.00	ug/L	50.0	ND	110	60-140	2.08	25	
Surrogate: 1,2-Dichloroethane-d4	*49.6*		ug/L	*50.0*		*99.2*	*70-130*			
Surrogate: Toluene-d8	*48.7*		ug/L	*50.0*		*97.4*	*70-130*			
Surrogate: Pentafluorobenzene	*52.2*		ug/L	*50.0*		*104*	*70-130*			

CERTIFICATE OF ANALYSIS

D1A1285

Definitions

MCL:	US EPA Maximum Contaminant Level
mg CaCO3/L	Milligrams Calcium Carbonate per Liter
mg/L:	Milligrams per Liter
RL:	Reporting Limit
RPD:	Relative Percent Difference
ug/L:	Micrograms per Liter
Y1:	Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.3°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008	Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Melisa L. Montgomery
Quality Assurance Officer
Reported: 01/22/2021 16:05

MICROBAC

D 1 A 1 2 8 5

W & C - Plymouth

Microbac Laboratories, Inc.

FOR LAB USE ONLY

Lab WO#

Project Manager

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

DELIVERY: ROBERT BLANCHARD

E-MAIL: [redacted]

PHONE: 508-830-4159 FAX: 508-732-0238

Billing Information

BILL TO: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

PURCHASE ORDER #

ATTENTION: ACCOUNTS PAYABLE

PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP

LOCATION: ID 11773

WELLS - QUARTERLY

ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL

ROBERT SCOTT

PHONE: CELL - 860-204-7988

FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # A16 (250 mL)	1/14/2021	1215		X	WW	1	X	X											X			
Well # A16 ~~(250 mL)~~ 950	1/14/2021	1215		X	WW	1			X	X								X				
Well # A16 (250 mL)(filtered)	1/14/2021	1215		X	WW	1					X							X				
Well # A16 ~~(250 mL)~~ 250	1/14/2021	1215		X	WW	1						X						X				
Well # A16 ~~(250 mL)~~ 250	1/14/2021	1215		X	WW	1							X					X				
Well # A16 (250 mL)	1/14/2021	1215		X	WW	1								X	X	X					X	
Well # (250 mL) A16	1/14/2021	1215		X	WW	2		PRESERVATIVE VERIFIED Initials									X	X				
Well # (40 mL vial) A16	1/14/2021	1215		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER: Spencer Whalen	1/14/21	
RECEIVED:		
RELINQUISHED: Spencer Whalen	1/14/21	13:50
RECEIVED: Patrick Ellen	1.14.2021	1350
RELINQUISHED: Patrick Ellen	1.14.2021	1735
RECEIVED:	1-14-21	1735

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☐ AMBIENT ☐ 2.3°C

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A1288

Project Description

Wells - Quarterly

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Friday, January 22, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1A1288

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Quarterly

Project / PO Number: 346346
Received: 01/14/2021
Reported: 01/22/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well 1S	D1A1288-01	Groundwater	Grab		01/14/21 11:32	01/14/21 17:35
Well 1S	D1A1288-02	Groundwater	Grab		01/14/21 11:32	01/14/21 17:35
Well 1S (filtered)	D1A1288-03	Groundwater	Grab		01/14/21 11:32	01/14/21 17:35
Well 1S	D1A1288-04	Groundwater	Grab		01/14/21 11:32	01/14/21 17:35
Well 1S	D1A1288-05	Groundwater	Grab		01/14/21 11:32	01/14/21 17:35
Well 1S	D1A1288-06	Groundwater	Grab		01/14/21 11:32	01/14/21 17:35
Well 1S	D1A1288-07	Groundwater	Grab		01/14/21 11:32	01/14/21 17:35
Well 1S	D1A1288-08	Groundwater	Grab		01/14/21 11:32	01/14/21 17:35

CERTIFICATE OF ANALYSIS

D1A1288

Analytical Testing Parameters

Client Sample ID: Well 1S
Sample Matrix: Groundwater
Lab Sample ID: D1A1288-01
Collected By: Customer
Collection Date: 01/14/2021 11:32

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 351.1								
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L	1		01/20/21 1356	01/21/21 1605	CLW
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0106**	0.0106	mg/L	1		01/18/21 1619	01/19/21 1044	CLW

Client Sample ID: Well 1S
Sample Matrix: Groundwater
Lab Sample ID: D1A1288-02
Collected By: Customer
Collection Date: 01/14/2021 11:32

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-NO3¯ F-2011								
Nitrate as N	**0.0939**	0.0500	mg/L	1			01/14/21 2033	DJM
Nitrite as N	<0.0100	0.0100	mg/L	1	**Y1**		01/14/21 2033	DJM

Client Sample ID: Well 1S (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1A1288-03
Collected By: Customer
Collection Date: 01/14/2021 11:32

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0160**	0.0100	mg/L	1		01/14/21 1753	01/14/21 1911	DJM

Client Sample ID: Well 1S
Sample Matrix: Groundwater
Lab Sample ID: D1A1288-04
Collected By: Customer
Collection Date: 01/14/2021 11:32

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 2320 B-2011								
Alkalinity to pH 4.5	**3.00**	1.00	mg CaCO3/L	1			01/16/21 1538	MAD

CERTIFICATE OF ANALYSIS

D1A1288

Client Sample ID: Well 1S
Sample Matrix: Groundwater
Lab Sample ID: D1A1288-05
Collected By: Customer
Collection Date: 01/14/2021 11:32

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-Cl E-2011								
Chloride	**13.8**	2.00	mg/L	1			01/18/21 1559	CLW

Client Sample ID: Well 1S
Sample Matrix: Groundwater
Lab Sample ID: D1A1288-06
Collected By: Customer
Collection Date: 01/14/2021 11:32

Metals Total by ICP	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.7, Rv. 4.4 (1994)								
Boron	**0.0070**	0.0050	mg/L	1	**Y1**	01/18/21 1333	01/20/21 1319	JDF
Copper	<0.0020	0.0020	mg/L	1		01/18/21 1333	01/19/21 1615	JDF
Sodium	**8.32**	1.00	mg/L	1		01/18/21 1333	01/19/21 1615	JDF

Client Sample ID: Well 1S
Sample Matrix: Groundwater
Lab Sample ID: D1A1288-07
Collected By: Customer
Collection Date: 01/14/2021 11:32

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acrolein	<20.0	20.0	ug/L	1			01/15/21 1531	JAN
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	1			01/15/21 1531	JAN
Surrogate: 1,2-Dichloroethane-d4	98.5	Limit: 70-130	% Rec	1			01/15/21 1531	JAN
Surrogate: Toluene-d8	102	Limit: 70-130	% Rec	1			01/15/21 1531	JAN
Surrogate: Pentafluorobenzene	83.2	Limit: 70-130	% Rec	1			01/15/21 1531	JAN

CERTIFICATE OF ANALYSIS

D1A1288

Client Sample ID:	Well 1S		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A1288-08	**Collection Date:**	01/14/2021 11:32

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acetone	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0250	JAN
Acrylonitrile	<20.0	20.0	ug/L	1			01/21/21 0250	JAN
Benzene	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
Bromodichloromethane	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
Bromoform	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
Bromomethane	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
2-Butanone (MEK)	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0250	JAN
Carbon disulfide	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0250	JAN
Carbon tetrachloride	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
Chlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
Chloroform	<4.00	4.00	ug/L	1			01/21/21 0250	JAN
Chloromethane	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
Dibromochloromethane	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0250	JAN
1,2-Dichlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
1,3-Dichlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
1,4-Dichlorobenzene	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0250	JAN
1,2-Dichloroethane	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
1,1-Dichloroethane	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
cis-1,2-Dichloroethene	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0250	JAN
1,1-Dichloroethene	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
trans-1,2-Dichloroethene	<4.00	4.00	ug/L	1			01/21/21 0250	JAN
1,2-Dichloropropane	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
cis-1,3-Dichloropropene	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
trans-1,3-Dichloropropene	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
Ethylbenzene	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
2-Hexanone (MBK)	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0250	JAN
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0250	JAN
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L	1			01/21/21 0250	JAN
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0250	JAN
Styrene	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0250	JAN
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
Tetrachloroethene	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
Toluene	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
1,1,2-Trichloroethane	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
1,1,1-Trichloroethane	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
Trichloroethene	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
Vinyl chloride	<5.00	5.00	ug/L	1			01/21/21 0250	JAN
m,p-Xylene	<10.0	10.0	ug/L	1	**Y1**		01/21/21 0250	JAN

CERTIFICATE OF ANALYSIS

D1A1288

Client Sample ID:	Well 1S		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1A1288-08	**Collection Date:**	01/14/2021 11:32

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
o-Xylene	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0250	JAN
Vinyl acetate	<5.00	5.00	ug/L	1	**Y1**		01/21/21 0250	JAN
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 70-130	% Rec	1			01/21/21 0250	JAN
Surrogate: Toluene-d8	105	Limit: 70-130	% Rec	1			01/21/21 0250	JAN
Surrogate: Pentafluorobenzene	101	Limit: 70-130	% Rec	1			01/21/21 0250	JAN

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DA10785	DA10785-BS1	
		DA10785-BLK1	
		DA10785-MS1	D1A1285-03
		DA10785-DUP1	D1A1285-03
		D1A1288-03	Well 1S (filtered)
		DA10785-MS2	D1A1288-03

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-$NO3^{-}$ F-2011	DA10796	DA10796-DUP1	D1A1281-02
		DA10796-DUP1	D1A1281-02
		DA10796-MS1	D1A1281-02
		DA10796-MS1	D1A1281-02
		DA10796-MSD1	D1A1281-02
		DA10796-MSD1	D1A1281-02
		D1A1288-02	Well 1S
		D1A1288-02	Well 1S
		DA10796-BS1	
		DA10796-BS2	
		DA10796-BLK1	
		DA10796-BLK1	

Method	Batch	Laboratory ID	Client / Source ID
SM 2320 B-2011	DA10887	D1A1288-04	Well 1S
		DA10887-BLK1	
		DA10887-DUP1	D1A1281-04
		DA10887-BS1	

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-Cl E-2011	DA10893	DA10893-BS1	
		DA10893-BLK1	
		D1A1288-05	Well 1S
		DA10893-DUP1	D1A1288-05
		DA10893-MS1	D1A1288-05
		DA10893-MSD1	D1A1288-05

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.7, Rv. 4.4 (1994)	DA10898	DA10898-BLK1	
		DA10898-BS1	
		DA10898-DUP1	D1A1338-01
		DA10898-MS1	D1A1338-01
		D1A1288-06	Well 1S

EPA 200.7, Rv. 4.4 (1994)	DA10898	D1A1288-06	Well 1S
		DA10898-MS2	D1A1381-02
		DA10898-BLK2	
		DA10898-BS2	
		DA10898-DUP2	D1A1338-01
		DA10898-MS3	D1A1338-01
		D1A1288-06	Well 1S
		DA10898-MS4	D1A1338-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DA10901	DA10901-BS1	
		DA10901-BLK1	
		DA10901-MS1	L1A0201-01
		DA10901-DUP1	L1A0201-01
		DA10901-MS2	L1A0192-02
		D1A1288-01	Well 1S

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DA11074	DA11074-BS1	
		DA11074-BLK1	
		D1A1288-07	Well 1S
		DA11074-MS1	D1A1281-07
		DA11074-MSD1	D1A1281-07

Method	Batch	Laboratory ID	Client / Source ID
EPA 351.1	DA11085	DA11085-BS1	
		DA11085-BLK1	
		DA11085-DUP1	D1A1379-04
		DA11085-MS1	D1A1379-04
		D1A1288-01	Well 1S
		DA11085-MS2	D1A1396-07

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DA11220	DA11220-BS1	
		DA11220-BLK1	
		D1A1288-08	Well 1S
		DA11220-MS1	D1A1229-01
		DA11220-MSD1	D1A1229-01

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10785 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10785-BLK1)	Prepared & Analyzed: 01/14/2021									

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10785 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10785-BLK1)			Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DA10785-BS1)			Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.974	0.0100	mg/L	1.00		97.3	90-110			
Duplicate (DA10785-DUP1)	**Source: D1A1285-03**		Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.0150	0.0100	mg/L		0.0170			12.5	20	
Matrix Spike (DA10785-MS1)	**Source: D1A1285-03**		Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.981	0.0100	mg/L	1.00	0.0170	96.3	90-110			
Matrix Spike (DA10785-MS2)	**Source: D1A1288-03**		Prepared & Analyzed: 01/14/2021							
Ortho-phosphate as P	0.997	0.0100	mg/L	1.00	0.0160	98.0	90-110			
Batch DA10796 - Wet Chem - W - SM 4500-NO_3^- F-2011										
Blank (DA10796-BLK1)			Prepared & Analyzed: 01/14/2021							
Nitrite as N	<0.0100	0.0100	mg/L							
Nitrate as N	<0.0500	0.0500	mg/L							
LCS (DA10796-BS1)			Prepared & Analyzed: 01/14/2021							
Nitrate as N	4.83	0.0500	mg/L	5.00		96.6	90-110			
LCS (DA10796-BS2)			Prepared & Analyzed: 01/14/2021							
Nitrite as N	1.01	0.0100	mg/L	1.00		101	90-110			
Duplicate (DA10796-DUP1)	**Source: D1A1281-02**		Prepared & Analyzed: 01/14/2021							
Nitrite as N	<0.0100	0.0100	mg/L		ND				20	
Nitrate as N	1.71	0.0500	mg/L		1.72			0.117	20	
Matrix Spike (DA10796-MS1)	**Source: D1A1281-02**		Prepared & Analyzed: 01/14/2021							
Nitrite as N	1.08	0.0100	mg/L	1.00	ND	108	75-125			
Nitrate as N	6.42	0.0500	mg/L	5.00	1.72	94.1	75-125			
Matrix Spike Dup (DA10796-MSD1)	**Source: D1A1281-02**		Prepared & Analyzed: 01/14/2021							
Nitrite as N	1.06	0.0100	mg/L	1.00	ND	106	75-125	1.43	20	
Nitrate as N	6.40	0.0500	mg/L	5.00	1.72	93.7	75-125	0.307	20	
Batch DA10887 - Wet Chem - W - SM 2320 B-2011										
Blank (DA10887-BLK1)			Prepared & Analyzed: 01/16/2021							
Alkalinity to pH 4.5	<1.00	1.00	mg $CaCO_3$/L							
LCS (DA10887-BS1)			Prepared & Analyzed: 01/16/2021							
Alkalinity to pH 4.5	50.0	1.00	mg $CaCO_3$/L	50.0		100	90-110			
Duplicate (DA10887-DUP1)	**Source: D1A1281-04**		Prepared & Analyzed: 01/16/2021							
Alkalinity to pH 4.5	5.00	1.00	mg $CaCO_3$/L		4.50			10.5	20	

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10893 - Wet Chem - W - SM 4500-Cl E-2011										
Blank (DA10893-BLK1)			Prepared & Analyzed: 01/18/2021							
Chloride	<2.00	2.00	mg/L							
LCS (DA10893-BS1)			Prepared & Analyzed: 01/18/2021							
Chloride	19.5	2.00	mg/L	20.0		97.4	90-110			
Duplicate (DA10893-DUP1)		**Source: D1A1288-05**	Prepared & Analyzed: 01/18/2021							
Chloride	13.8	2.00	mg/L		13.8			0.0153	20	
Matrix Spike (DA10893-MS1)		**Source: D1A1288-05**	Prepared & Analyzed: 01/18/2021							
Chloride	34.2	2.00	mg/L	20.0	13.8	102	75-125			
Matrix Spike Dup (DA10893-MSD1)		**Source: D1A1288-05**	Prepared & Analyzed: 01/18/2021							
Chloride	34.6	2.00	mg/L	20.0	13.8	104	75-125	0.964	20	
Batch DA10901 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DA10901-BLK1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DA10901-BS1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	1.02	0.0106	mg/L	1.00		102	90-110			
Duplicate (DA10901-DUP1)		**Source: L1A0201-01**	Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	0.590	0.0106	mg/L		0.583			1.09	20	
Matrix Spike (DA10901-MS1)		**Source: L1A0201-01**	Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	1.87	0.0106	mg/L	1.25	0.583	103	90-110			
Matrix Spike (DA10901-MS2)		**Source: L1A0192-02**	Prepared: 01/18/2021 Analyzed: 01/19/2021							
Phosphorus - Total as P	1.42	0.0106	mg/L	1.25	0.216	96.0	90-110			
Batch DA11085 - Wet-Digestion-W - EPA 351.1										
Blank (DA11085-BLK1)			Prepared: 01/20/2021 Analyzed: 01/21/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L							
LCS (DA11085-BS1)			Prepared: 01/20/2021 Analyzed: 01/21/2021							
Total Kjeldahl Nitrogen (TKN)	5.07	0.200	mg/L	5.00		101	90-110			
Duplicate (DA11085-DUP1)		**Source: D1A1379-04**	Prepared: 01/20/2021 Analyzed: 01/21/2021							
Total Kjeldahl Nitrogen (TKN)	5.05	0.200	mg/L		5.29			4.59	20	
Matrix Spike (DA11085-MS1)		**Source: D1A1379-04**	Prepared: 01/20/2021 Analyzed: 01/21/2021							
Total Kjeldahl Nitrogen (TKN)	15.9	0.200	mg/L	10.0	5.29	106	90-110			
Matrix Spike (DA11085-MS2)		**Source: D1A1396-07**	Prepared: 01/20/2021 Analyzed: 01/21/2021							
Total Kjeldahl Nitrogen (TKN)	22.9	0.400	mg/L	10.0	12.6	102	90-110			

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10898 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DA10898-BLK1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	<0.0020	0.0020	mg/L							
Sodium	<1.00	1.00	mg/L							

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA10898 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DA10898-BLK2)			Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	<0.0050	0.0050	mg/L							
LCS (DA10898-BS1)			Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.533	0.0020	mg/L	0.500		107	85-115			
Sodium	10.3	1.00	mg/L	10.5		97.9	85-115			
LCS (DA10898-BS2)			Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.523	0.0050	mg/L	0.500		105	85-115			
Duplicate (DA10898-DUP1)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.0045	0.0020	mg/L		0.0042			6.88	20	
Sodium	39.5	1.00	mg/L		39.1			0.946	20	
Duplicate (DA10898-DUP2)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.0660	0.0050	mg/L		0.0653			1.04	20	
Matrix Spike (DA10898-MS1)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.532	0.0020	mg/L	0.500	0.0042	106	70-130			
Sodium	50.0	1.00	mg/L	10.5	39.1	104	70-130			
Matrix Spike (DA10898-MS2)	**Source: D1A1381-02**		Prepared: 01/18/2021 Analyzed: 01/19/2021							
Copper	0.549	0.0020	mg/L	0.500	0.0155	107	70-130			
Sodium	216	1.00	mg/L	10.5	207	79.1	70-130			
Matrix Spike (DA10898-MS3)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.576	0.0050	mg/L	0.500	0.0653	102	70-130			
Matrix Spike (DA10898-MS4)	**Source: D1A1338-01**		Prepared: 01/18/2021 Analyzed: 01/20/2021							
Boron	0.619	0.0050	mg/L	0.500	0.0653	111	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11074 - 624.1 - EPA 624.1										
Blank (DA11074-BLK1)			Prepared & Analyzed: 01/15/2021							
Acrolein	<20.0	20.0	ug/L							
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*49.4*		ug/L	*50.0*		*98.8*	*70-130*			
Surrogate: Toluene-d8	*50.0*		ug/L	*50.0*		*100*	*70-130*			
Surrogate: Pentafluorobenzene	*42.3*		ug/L	*50.0*		*84.6*	*70-130*			
LCS (DA11074-BS1)			Prepared & Analyzed: 01/15/2021							
Acrolein	34.1	20.0	ug/L	50.0		68.2	60-140			
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0		21.6	1-305			
Surrogate: 1,2-Dichloroethane-d4	*49.3*		ug/L	*50.0*		*98.6*	*70-130*			
Surrogate: Toluene-d8	*50.8*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Pentafluorobenzene	*42.5*		ug/L	*50.0*		*84.9*	*70-130*			
Matrix Spike (DA11074-MS1)	**Source: D1A1281-07**		Prepared & Analyzed: 01/15/2021							
Acrolein	30.3	20.0	ug/L	50.0	ND	60.7	40-160			
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0	ND	19.9	1-305			
Surrogate: 1,2-Dichloroethane-d4	*48.7*		ug/L	*50.0*		*97.4*	*70-130*			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11074 - 624.1 - EPA 624.1										
Matrix Spike (DA11074-MS1)	**Source: D1A1281-07**		Prepared & Analyzed: 01/15/2021							
Surrogate: Toluene-d8	*50.5*		ug/L	*50.0*		*101*	*70-130*			
Surrogate: Pentafluorobenzene	*43.9*		ug/L	*50.0*		*87.7*	*70-130*			
Matrix Spike Dup (DA11074-MSD1)	**Source: D1A1281-07**		Prepared & Analyzed: 01/15/2021							
Acrolein	31.2	20.0	ug/L	50.0	ND	62.3	40-160	2.63	60	
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	50.0	ND	20.5	1-305	2.97	71	
Surrogate: 1,2-Dichloroethane-d4	*50.0*		ug/L	*50.0*		*100*	*70-130*			
Surrogate: Toluene-d8	*50.9*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Pentafluorobenzene	*42.9*		ug/L	*50.0*		*85.8*	*70-130*			
Batch DA11220 - 624.1 - EPA 624.1										
Blank (DA11220-BLK1)			Prepared & Analyzed: 01/20/2021							
Acetone	<10.0	10.0	ug/L							
Acrylonitrile	<20.0	20.0	ug/L							
Benzene	<5.00	5.00	ug/L							
Bromodichloromethane	<5.00	5.00	ug/L							
Bromoform	<5.00	5.00	ug/L							
Bromomethane	<5.00	5.00	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Carbon disulfide	<5.00	5.00	ug/L							
Carbon tetrachloride	<5.00	5.00	ug/L							
Chlorobenzene	<5.00	5.00	ug/L							
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L							
Chloroform	<4.00	4.00	ug/L							
Chloromethane	<5.00	5.00	ug/L							
Dibromochloromethane	<5.00	5.00	ug/L							
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L							
1,2-Dichlorobenzene	<5.00	5.00	ug/L							
1,3-Dichlorobenzene	<5.00	5.00	ug/L							
1,4-Dichlorobenzene	<5.00	5.00	ug/L							
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L							
1,2-Dichloroethane	<5.00	5.00	ug/L							
1,1-Dichloroethane	<5.00	5.00	ug/L							
cis-1,2-Dichloroethene	<5.00	5.00	ug/L							
1,1-Dichloroethene	<5.00	5.00	ug/L							
trans-1,2-Dichloroethene	<4.00	4.00	ug/L							
1,2-Dichloropropane	<5.00	5.00	ug/L							
cis-1,3-Dichloropropene	<5.00	5.00	ug/L							
trans-1,3-Dichloropropene	<5.00	5.00	ug/L							
Ethylbenzene	<5.00	5.00	ug/L							
2-Hexanone (MBK)	<10.0	10.0	ug/L							
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
Blank (DA11220-BLK1)			Prepared & Analyzed: 01/20/2021							
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L							
Styrene	<5.00	5.00	ug/L							
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L							
Tetrachloroethene	<5.00	5.00	ug/L							
Toluene	<5.00	5.00	ug/L							
1,1,2-Trichloroethane	<5.00	5.00	ug/L							
1,1,1-Trichloroethane	<5.00	5.00	ug/L							
Trichloroethene	<5.00	5.00	ug/L							
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L							
Vinyl chloride	<5.00	5.00	ug/L							
m,p-Xylene	<10.0	10.0	ug/L							
o-Xylene	<5.00	5.00	ug/L							
Vinyl acetate	<5.00	5.00	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*52.5*		ug/L	*50.0*		*105*	*70-130*			
Surrogate: Toluene-d8	*51.7*		ug/L	*50.0*		*103*	*70-130*			
LCS (DA11220-BS1)			Prepared & Analyzed: 01/20/2021							
Acetone	31.9	10.0	ug/L	50.0		63.8	42.1-136			
Acrylonitrile	42.2	20.0	ug/L	50.0		84.4	60-140			
Benzene	46.1	5.00	ug/L	50.0		92.3	65-135			
Bromodichloromethane	44.8	5.00	ug/L	50.0		89.6	65-135			
Bromoform	47.3	5.00	ug/L	50.0		94.6	70-130			
Bromomethane	42.6	5.00	ug/L	50.0		85.1	15-185			
2-Butanone (MEK)	35.5	10.0	ug/L	50.0		71.0	63.1-143			
Carbon disulfide	42.6	5.00	ug/L	50.0		85.2	63.5-124			
Carbon tetrachloride	46.9	5.00	ug/L	50.0		93.7	70-130			
Chlorobenzene	47.3	5.00	ug/L	50.0		94.6	65-135			
Chloroethane (Ethyl chloride)	37.2	5.00	ug/L	50.0		74.5	40-160			
Chloroform	47.8	4.00	ug/L	50.0		95.6	70-135			
Chloromethane	44.1	5.00	ug/L	50.0		88.2	1-205			
Dibromochloromethane	47.6	5.00	ug/L	50.0		95.2	70-135			
Dibromomethane (Methylene bromide)	47.7	5.00	ug/L	50.0		95.4	73.8-124			
1,2-Dichlorobenzene	44.5	5.00	ug/L	50.0		89.0	65-135			
1,3-Dichlorobenzene	44.5	5.00	ug/L	50.0		88.9	70-130			
1,4-Dichlorobenzene	43.8	5.00	ug/L	50.0		87.5	65-135			
Dichlorodifluoromethane (Freon-12)	41.9	5.00	ug/L	50.0		83.8	34.7-129			
1,2-Dichloroethane	48.4	5.00	ug/L	50.0		96.9	70-130			
1,1-Dichloroethane	44.6	5.00	ug/L	50.0		89.1	70-130			
cis-1,2-Dichloroethene	44.4	5.00	ug/L	50.0		88.8	75.5-125			
1,1-Dichloroethene	42.3	5.00	ug/L	50.0		84.6	50-150			
trans-1,2-Dichloroethene	49.3	4.00	ug/L	50.0		98.5	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
LCS (DA11220-BS1)				Prepared & Analyzed: 01/20/2021						
1,2-Dichloropropane	45.6	5.00	ug/L	50.0		91.2	35-165			
cis-1,3-Dichloropropene	49.3	5.00	ug/L	50.0		98.6	25-175			
trans-1,3-Dichloropropene	46.0	5.00	ug/L	50.0		91.9	50-150			
Ethylbenzene	45.7	5.00	ug/L	50.0		91.5	60-140			
2-Hexanone (MBK)	39.7	10.0	ug/L	50.0		79.4	73.6-130			
Methyl tert-butyl ether (MTBE)	42.9	5.00	ug/L	50.0		85.7	69-151			
Methylene chloride (Dichloromethane)	47.5	1.00	ug/L	50.0		95.0	60-140			
4-Methyl-2-pentanone (MIBK)	38.8	10.0	ug/L	50.0		77.7	72.5-129			
Styrene	49.9	5.00	ug/L	50.0		99.8	79.2-127			
1,1,2,2-Tetrachloroethane	50.5	5.00	ug/L	50.0		101	60-140			
Tetrachloroethene	46.2	5.00	ug/L	50.0		92.5	70-130			
Toluene	45.7	5.00	ug/L	50.0		91.5	70-130			
1,1,2-Trichloroethane	45.7	5.00	ug/L	50.0		91.4	70-130			
1,1,1-Trichloroethane	47.3	5.00	ug/L	50.0		94.6	70-130			
Trichloroethene	48.2	5.00	ug/L	50.0		96.4	65-135			
Trichlorofluoromethane (Freon 11)	35.8	5.00	ug/L	50.0		71.6	50-150			
Vinyl chloride	44.6	5.00	ug/L	50.0		89.2	5-195			
m,p-Xylene	98.6	10.0	ug/L	100		98.6	77.1-129			
o-Xylene	47.1	5.00	ug/L	50.0		94.3	78.8-126			
Vinyl acetate	42.5	5.00	ug/L	50.0		85.1	60-140			
Surrogate: 1,2-Dichloroethane-d4	*47.6*		ug/L	*50.0*		*95.2*	*70-130*			
Surrogate: Toluene-d8	*49.8*		ug/L	*50.0*		*99.6*	*70-130*			
Surrogate: Pentafluorobenzene	*51.6*		ug/L	*50.0*		*103*	*70-130*			
Matrix Spike (DA11220-MS1)	**Source: D1A1229-01**			Prepared & Analyzed: 01/21/2021						
Acetone	32.1	10.0	ug/L	50.0	ND	64.2	0-200			
Acrylonitrile	43.2	20.0	ug/L	50.0	ND	86.4	40-160			
Benzene	51.1	5.00	ug/L	50.0	ND	102	37-151			
Bromodichloromethane	47.7	5.00	ug/L	50.0	ND	95.4	35-155			
Bromoform	45.5	5.00	ug/L	50.0	ND	91.0	45-169			
Bromomethane	47.8	5.00	ug/L	50.0	ND	95.6	1-242			
2-Butanone (MEK)	37.3	10.0	ug/L	50.0	ND	74.6	0-200			
Carbon disulfide	46.0	5.00	ug/L	50.0	ND	92.0	0-200			
Carbon tetrachloride	54.5	5.00	ug/L	50.0	ND	109	70-140			
Chlorobenzene	49.6	5.00	ug/L	50.0	ND	99.3	37-160			
Chloroethane (Ethyl chloride)	41.4	5.00	ug/L	50.0	ND	82.8	14-230			
Chloroform	51.4	4.00	ug/L	50.0	ND	103	51-138			
Chloromethane	54.1	5.00	ug/L	50.0	ND	108	1-273			
Dibromochloromethane	46.8	5.00	ug/L	50.0	ND	93.7	53-149			
Dibromomethane (Methylene bromide)	48.5	5.00	ug/L	50.0	ND	96.9	0-200			
1,2-Dichlorobenzene	44.3	5.00	ug/L	50.0	ND	88.7	18-190			
1,3-Dichlorobenzene	44.7	5.00	ug/L	50.0	ND	89.3	59-156			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
Matrix Spike (DA11220-MS1)	**Source: D1A1229-01**		Prepared & Analyzed: 01/21/2021							
1,4-Dichlorobenzene	42.2	5.00	ug/L	50.0	ND	84.4	18-190			
Dichlorodifluoromethane (Freon-12)	51.1	5.00	ug/L	50.0	ND	102	0-200			
1,2-Dichloroethane	50.3	5.00	ug/L	50.0	ND	101	49-155			
1,1-Dichloroethane	49.3	5.00	ug/L	50.0	ND	98.5	59-155			
cis-1,2-Dichloroethene	47.2	5.00	ug/L	50.0	ND	94.4	0-200			
1,1-Dichloroethene	47.8	5.00	ug/L	50.0	ND	95.6	1-234			
trans-1,2-Dichloroethene	53.0	4.00	ug/L	50.0	ND	106	54-156			
1,2-Dichloropropane	48.0	5.00	ug/L	50.0	ND	95.9	1-210			
cis-1,3-Dichloropropene	47.6	5.00	ug/L	50.0	ND	95.1	1-227			
trans-1,3-Dichloropropene	45.1	5.00	ug/L	50.0	ND	90.2	17-183			
Ethylbenzene	49.3	5.00	ug/L	50.0	ND	98.6	37-162			
2-Hexanone (MBK)	38.1	10.0	ug/L	50.0	ND	76.1	0-200			
Methyl tert-butyl ether (MTBE)	42.2	5.00	ug/L	50.0	ND	84.4	0-200			
Methylene chloride (Dichloromethane)	50.5	1.00	ug/L	50.0	ND	101	1-221			
4-Methyl-2-pentanone (MIBK)	38.3	10.0	ug/L	50.0	ND	76.5	0-200			
Styrene	52.3	5.00	ug/L	50.0	ND	105	0-200			
1,1,2,2-Tetrachloroethane	55.4	5.00	ug/L	50.0	ND	111	46-157			
Tetrachloroethene	49.1	5.00	ug/L	50.0	ND	98.2	64-148			
Toluene	49.1	5.00	ug/L	50.0	ND	98.2	47-150			
1,1,2-Trichloroethane	46.1	5.00	ug/L	50.0	ND	92.2	52-150			
1,1,1-Trichloroethane	53.6	5.00	ug/L	50.0	ND	107	52-162			
Trichloroethene	49.4	5.00	ug/L	50.0	ND	98.7	70-157			
Trichlorofluoromethane (Freon 11)	41.2	5.00	ug/L	50.0	ND	82.3	17-181			
Vinyl chloride	50.9	5.00	ug/L	50.0	ND	102	1-251			
m,p-Xylene	106	10.0	ug/L	100	ND	106	0-200			
o-Xylene	49.7	5.00	ug/L	50.0	ND	99.4	0-200			
Vinyl acetate	56.2	5.00	ug/L	50.0	ND	112	60-140			
Surrogate: 1,2-Dichloroethane-d4	*48.4*		ug/L	*50.0*		*96.8*	*70-130*			
Surrogate: Toluene-d8	*48.5*		ug/L	*50.0*		*96.9*	*70-130*			
Surrogate: Pentafluorobenzene	*53.2*		ug/L	*50.0*		*106*	*70-130*			
Matrix Spike Dup (DA11220-MSD1)	**Source: D1A1229-01**		Prepared & Analyzed: 01/21/2021							
Acetone	32.3	10.0	ug/L	50.0	ND	64.7	0-200	0.652	200	
Acrylonitrile	41.1	20.0	ug/L	50.0	ND	82.2	40-160	5.03	60	
Benzene	48.5	5.00	ug/L	50.0	ND	97.0	37-151	5.10	61	
Bromodichloromethane	45.0	5.00	ug/L	50.0	ND	90.0	35-155	5.83	56	
Bromoform	43.5	5.00	ug/L	50.0	ND	86.9	45-169	4.61	42	
Bromomethane	46.9	5.00	ug/L	50.0	ND	93.8	1-242	1.84	61	
2-Butanone (MEK)	38.6	10.0	ug/L	50.0	ND	77.2	0-200	3.32	200	
Carbon disulfide	43.3	5.00	ug/L	50.0	ND	86.6	0-200	6.05	200	
Carbon tetrachloride	49.9	5.00	ug/L	50.0	ND	99.8	70-140	8.72	41	
Chlorobenzene	45.8	5.00	ug/L	50.0	ND	91.5	37-160	8.11	53	
Chloroethane (Ethyl chloride)	37.9	5.00	ug/L	50.0	ND	75.7	14-230	8.96	78	

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DA11220 - 624.1 - EPA 624.1										
Matrix Spike Dup (DA11220-MSD1)	**Source: D1A1229-01**		Prepared & Analyzed: 01/21/2021							
Chloroform	48.9	4.00	ug/L	50.0	ND	97.8	51-138	5.00	54	
Chloromethane	51.6	5.00	ug/L	50.0	ND	103	1-273	4.84	60	
Dibromochloromethane	44.9	5.00	ug/L	50.0	ND	89.8	53-149	4.21	50	
Dibromomethane (Methylene bromide)	47.2	5.00	ug/L	50.0	ND	94.5	0-200	2.59	200	
1,2-Dichlorobenzene	41.5	5.00	ug/L	50.0	ND	83.0	18-190	6.57	57	
1,3-Dichlorobenzene	42.1	5.00	ug/L	50.0	ND	84.2	59-156	5.88	43	
1,4-Dichlorobenzene	40.8	5.00	ug/L	50.0	ND	81.7	18-190	3.23	57	
Dichlorodifluoromethane (Freon-12)	49.4	5.00	ug/L	50.0	ND	98.7	0-200	3.39	200	
1,2-Dichloroethane	49.3	5.00	ug/L	50.0	ND	98.5	49-155	2.09	49	
1,1-Dichloroethane	45.1	5.00	ug/L	50.0	ND	90.2	59-155	8.84	40	
cis-1,2-Dichloroethene	43.8	5.00	ug/L	50.0	ND	87.5	0-200	7.52	200	
1,1-Dichloroethene	45.1	5.00	ug/L	50.0	ND	90.2	1-234	5.83	32	
trans-1,2-Dichloroethene	49.0	4.00	ug/L	50.0	ND	98.1	54-156	7.78	45	
1,2-Dichloropropane	46.4	5.00	ug/L	50.0	ND	92.7	1-210	3.44	55	
cis-1,3-Dichloropropene	45.2	5.00	ug/L	50.0	ND	90.4	1-227	5.11	58	
trans-1,3-Dichloropropene	42.9	5.00	ug/L	50.0	ND	85.8	17-183	5.02	86	
Ethylbenzene	45.2	5.00	ug/L	50.0	ND	90.5	37-162	8.61	63	
2-Hexanone (MBK)	37.1	10.0	ug/L	50.0	ND	74.3	0-200	2.45	200	
Methyl tert-butyl ether (MTBE)	41.5	5.00	ug/L	50.0	ND	83.0	0-200	1.74	200	
Methylene chloride (Dichloromethane)	47.4	1.00	ug/L	50.0	ND	94.7	1-221	6.50	28	
4-Methyl-2-pentanone (MIBK)	36.0	10.0	ug/L	50.0	ND	71.9	0-200	6.23	200	
Styrene	48.5	5.00	ug/L	50.0	ND	96.9	0-200	7.58	200	
1,1,2,2-Tetrachloroethane	52.1	5.00	ug/L	50.0	ND	104	46-157	6.25	61	
Tetrachloroethene	45.8	5.00	ug/L	50.0	ND	91.7	64-148	6.85	39	
Toluene	44.8	5.00	ug/L	50.0	ND	89.6	47-150	9.18	41	
1,1,2-Trichloroethane	42.8	5.00	ug/L	50.0	ND	85.5	52-150	7.56	45	
1,1,1-Trichloroethane	51.1	5.00	ug/L	50.0	ND	102	52-162	4.93	36	
Trichloroethene	45.8	5.00	ug/L	50.0	ND	91.5	70-157	7.59	48	
Trichlorofluoromethane (Freon 11)	38.7	5.00	ug/L	50.0	ND	77.4	17-181	6.11	84	
Vinyl chloride	47.7	5.00	ug/L	50.0	ND	95.3	1-251	6.65	66	
m,p-Xylene	97.1	10.0	ug/L	100	ND	97.1	0-200	8.40	200	
o-Xylene	46.4	5.00	ug/L	50.0	ND	92.9	0-200	6.78	200	
Vinyl acetate	55.1	5.00	ug/L	50.0	ND	110	60-140	2.08	25	
Surrogate: 1,2-Dichloroethane-d4	*49.6*		ug/L	*50.0*		*99.2*	*70-130*			
Surrogate: Toluene-d8	*48.7*		ug/L	*50.0*		*97.4*	*70-130*			
Surrogate: Pentafluorobenzene	*52.2*		ug/L	*50.0*		*104*	*70-130*			

CERTIFICATE OF ANALYSIS

D1A1288

Definitions

MCL:	US EPA Maximum Contaminant Level
mg CaCO3/L	Milligrams Calcium Carbonate per Liter
mg/L:	Milligrams per Liter
RL:	Reporting Limit
RPD:	Relative Percent Difference
ug/L:	Micrograms per Liter
Y1:	Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.3°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008	Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Melisa L. Montgomery
Quality Assurance Officer
Reported: 01/22/2021 16:07

MICROBAC

Microbac Laboratories, Inc.

D 1 A 1 2 8 8

W & C - Plymouth

FOR LAB USE ONLY

Lab WO#

Project Manager

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

DELIVERY: ROBERT BLANCHARD

E-MAIL: [redacted]

PHONE: 508-830-4159 FAX: 508-732-0238

Billing Information

BILL TO: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

PURCHASE ORDER #

ATTENTION: ACCOUNTS PAYABLE

PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP

LOCATION: ID 11773

WELLS - QUARTERLY

ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL

ROBERT SCOTT

PHONE: CELL - 860-204-7988

FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # 1S (250 mL)	1/14/2021	1132		X	WW	1	X	X											X			
Well # 1S ~~(250 mL)~~	1/14/2021	1132		X	WW	1			X	X								X				
Well # 1S (250 mL)(filtered)	1/14/2021	1132		X	WW	1					X							X				
Well # 1S ~~(250 mL)~~	1/14/2021	1132		X	WW	1						X						X				
Well # 1S ~~(250 mL)~~	1/14/2021	1132		X	WW	1							X					X				
Well # 1S (250 mL)	1/14/2021	1132		X	WW	1			PRESERVATIVE VERIFIED Initials					X	X	X					X	
Well # (250 mL) 1S	1/14/2021	1132		X	WW	2											X	X				
Well # (40 mL vial) 1S	1/14/2021	1132		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	1/14/21	
RECEIVED:		
RELINQUISHED:	1/14/21	13:50
RECEIVED:	1.14.2021	1350
RELINQUISHED:	1.14.2021	1735
RECEIVED:	1-14-21	1735

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☐ AMBIENT ☐ 3.3°C

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1B0934

Project Description

Plymouth WWTP

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Friday, February 12, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1B0934

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Plymouth WWTP

Project / PO Number: 346346
Received: 02/10/2021
Reported: 02/12/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well A8	D1B0934-01	Groundwater	Grab		02/10/21 10:41	02/10/21 17:07
Well A8 (filtered)	D1B0934-02	Groundwater	Grab		02/10/21 10:41	02/10/21 17:07
Well A11	D1B0934-03	Groundwater	Grab		02/10/21 11:28	02/10/21 17:07
Well A11 (filtered)	D1B0934-04	Groundwater	Grab		02/10/21 11:28	02/10/21 17:07
Well A16	D1B0934-05	Groundwater	Grab		02/10/21 09:47	02/10/21 17:07
Well A16 (filtered)	D1B0934-06	Groundwater	Grab		02/10/21 09:47	02/10/21 17:07

CERTIFICATE OF ANALYSIS

D1B0934

Analytical Testing Parameters

Client Sample ID: Well A8
Sample Matrix: Groundwater
Lab Sample ID: D1B0934-01
Collected By: Customer
Collection Date: 02/10/2021 10:41

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**2.68**	0.0213	mg/L	2		02/10/21 1930	02/11/21 1341	CLW

Client Sample ID: Well A8 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1B0934-02
Collected By: Customer
Collection Date: 02/10/2021 10:41

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**2.71**	0.0200	mg/L	2		02/10/21 1810	02/10/21 1936	DJM

Client Sample ID: Well A11
Sample Matrix: Groundwater
Lab Sample ID: D1B0934-03
Collected By: Customer
Collection Date: 02/10/2021 11:28

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0159**	0.0106	mg/L	1		02/10/21 1930	02/11/21 1319	CLW

Client Sample ID: Well A11 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1B0934-04
Collected By: Customer
Collection Date: 02/10/2021 11:28

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0320**	0.0100	mg/L	1		02/10/21 1810	02/10/21 1923	DJM

Client Sample ID: Well A16
Sample Matrix: Groundwater
Lab Sample ID: D1B0934-05
Collected By: Customer
Collection Date: 02/10/2021 9:47

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	<0.0106	0.0106	mg/L	1		02/10/21 1930	02/11/21 1319	CLW

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1B0934

Client Sample ID:	Well A16 (filtered)		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1B0934-06	**Collection Date:**	02/10/2021 9:47

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	<0.0100	0.0100	mg/L	1		02/10/21 1810	02/10/21 1924	DJM

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DB10574	DB10574-BS1	
		DB10574-BLK1	
		DB10574-MS1	D1B0858-02
		DB10574-DUP1	D1B0858-02
		D1B0934-05	Well A16
		D1B0934-03	Well A11
		D1B0934-01	Well A8
		DB10574-MS2	D1B0918-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DB10590	DB10590-BS1	
		DB10590-BLK1	
		D1B0934-04	Well A11 (filtered)
		D1B0934-06	Well A16 (filtered)
		D1B0934-02	Well A8 (filtered)
		DB10590-DUP1	D1B0934-02
		DB10590-MS1	D1B0934-02

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DB10574 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DB10574-BLK1)			Prepared: 02/10/2021 Analyzed: 02/11/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DB10574-BS1)			Prepared: 02/10/2021 Analyzed: 02/11/2021							
Phosphorus - Total as P	1.01	0.0106	mg/L	1.00		101	90-110			
Duplicate (DB10574-DUP1)	**Source: D1B0858-02**		Prepared: 02/10/2021 Analyzed: 02/11/2021							
Phosphorus - Total as P	0.112	0.0106	mg/L		0.107			3.88	20	
Matrix Spike (DB10574-MS1)	**Source: D1B0858-02**		Prepared: 02/10/2021 Analyzed: 02/11/2021							
Phosphorus - Total as P	1.33	0.0106	mg/L	1.25	0.107	97.4	90-110			
Matrix Spike (DB10574-MS2)	**Source: D1B0918-01**		Prepared: 02/10/2021 Analyzed: 02/11/2021							
Phosphorus - Total as P	4.77	0.0425	mg/L	1.25	3.45	106	90-110			

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1B0934

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DB10590 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DB10590-BLK1)			Prepared & Analyzed: 02/10/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DB10590-BS1)			Prepared & Analyzed: 02/10/2021							
Ortho-phosphate as P	1.02	0.0100	mg/L	1.00		102	90-110			
Duplicate (DB10590-DUP1)		**Source: D1B0934-02**	Prepared & Analyzed: 02/10/2021							
Ortho-phosphate as P	2.66	0.0200	mg/L		2.71			1.72	20	
Matrix Spike (DB10590-MS1)		**Source: D1B0934-02**	Prepared & Analyzed: 02/10/2021							
Ortho-phosphate as P	3.69	0.0400	mg/L	1.00	2.71	98.5	90-110			

Definitions

mg/L: Milligrams per Liter
RL: Reporting Limit
RPD: Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 2.2°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville
M-CT008 — Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Melisa L. Montgomery
Quality Assurance Officer
Reported: 02/12/2021 13:33

MICROBAC

61 Lou
Tel: (

D 1 B 0 9 3 4

W & C - Plymouth

Microbac Laboratories, Inc.

FOR LAB USE ONLY

Lab WO#

Project Manager hAM

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

DELIVERY: ROBERT SCOTT

E-MAIL: [redacted]

PHONE: 508-830-4159 FAX: 508-732-0238

BILL TO: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA

PURCHASE ORDER #

ATTENTION: ACCOUNTS PAYABLE

PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP

LOCATION: ID 11773

Wells - Monthly TP & Ortho-P

ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL

ROBERT SCOTT

PHONE: CELL - 860-204-7988

FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TOTAL PHOS.	Analysis: ORTHO-PHOS	Preservatives: NON-PRES	Preservatives: HS2O4	Preservatives: HCL	Preservatives: HNO3	Preservatives: OTHER
Well # A8 (250 mL)	2/10/2021	1041		X	WW	1	X			X			
Well # A8 (250 mL) (filtered)	2/10/2021	1041		X	WW	1		X	X				
Well # A11 (250 mL)	2/10/2021	1128		X	WW	1	X			X			
Well # A11 (250 mL) (filtered)	2/10/2021	1128		X	WW	1		X	X				
Well # A16 (250 mL)	2/10/2021	947		X	WW	1	X			X			
Well # A16 (250 mL) (filtered)	2/10/2021	947		X	WW	1		X	X				
~~Well # (250 mL)~~				X	WW	1	X			X			
~~Well # (250 mL) (filtered)~~				X	WW	1		X	X				
~~Well # (250 mL)~~				X	WW	1	X			X			
~~Well # (250 mL) (filtered)~~				X	WW	1		X	X				

PRESERVATIVE VERIFIED Initials KD.

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	2/10	
RECEIVED:		
RELINQUISHED:	2/10/21	15:15
ECEIVED: Keith Rhea	2-10-21	15:15
ELINQUISHED: Keith Rhea	2-10-21	17:07
ECEIVED:	2-10-21	1707

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☒ AMBIENT ☐

2.2°C KD.

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1B1474

Project Description

Wells - Monthly TO & OP

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Friday, February 19, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

MICROBAC®

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1B1474

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Monthly TO & OP

Project / PO Number: 346346
Received: 02/17/2021
Reported: 02/19/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well #1S	D1B1474-01	Groundwater	Grab		02/17/21 11:47	02/17/21 15:59
Well #1S (filtered)	D1B1474-02	Groundwater	Grab		02/17/21 11:47	02/17/21 15:59
Well #6S	D1B1474-03	Groundwater	Grab		02/17/21 09:06	02/17/21 15:59
Well #6S (filtered)	D1B1474-04	Groundwater	Grab		02/17/21 09:06	02/17/21 15:59
Well #6D	D1B1474-05	Groundwater	Grab		02/17/21 09:58	02/17/21 15:59
Well #6D (filtered)	D1B1474-06	Groundwater	Grab		02/17/21 09:58	02/17/21 15:59
Well #475	D1B1474-07	Groundwater	Grab		02/17/21 10:45	02/17/21 15:59
Well #475 (filtered)	D1B1474-08	Groundwater	Grab		02/17/21 10:45	02/17/21 15:59

CERTIFICATE OF ANALYSIS

D1B1474

Analytical Testing Parameters

Client Sample ID: Well #1S
Sample Matrix: Groundwater
Lab Sample ID: D1B1474-01
Collected By: Customer
Collection Date: 02/17/2021 11:47

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	<0.0106	0.0106	mg/L	1		02/17/21 1930	02/18/21 0957	CLW

Client Sample ID: Well #1S (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1B1474-02
Collected By: Customer
Collection Date: 02/17/2021 11:47

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0120**	0.0100	mg/L	1		02/17/21 1806	02/17/21 1906	DJM

Client Sample ID: Well #6S
Sample Matrix: Groundwater
Lab Sample ID: D1B1474-03
Collected By: Customer
Collection Date: 02/17/2021 9:06

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0298**	0.0106	mg/L	1		02/17/21 1930	02/18/21 1007	CLW

Client Sample ID: Well #6S (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1B1474-04
Collected By: Customer
Collection Date: 02/17/2021 9:06

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0110**	0.0100	mg/L	1		02/17/21 1806	02/17/21 1910	DJM

Client Sample ID: Well #6D
Sample Matrix: Groundwater
Lab Sample ID: D1B1474-05
Collected By: Customer
Collection Date: 02/17/2021 9:58

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0170**	0.0106	mg/L	1		02/17/21 1930	02/18/21 1007	CLW

CERTIFICATE OF ANALYSIS

D1B1474

Client Sample ID: Well #6D (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1B1474-06
Collected By: Customer
Collection Date: 02/17/2021 9:58

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0190**	0.0100	mg/L	1		02/17/21 1806	02/17/21 1910	DJM

Client Sample ID: Well #475
Sample Matrix: Groundwater
Lab Sample ID: D1B1474-07
Collected By: Customer
Collection Date: 02/17/2021 10:45

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0213**	0.0106	mg/L	1		02/17/21 1930	02/18/21 1008	CLW

Client Sample ID: Well #475 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1B1474-08
Collected By: Customer
Collection Date: 02/17/2021 10:45

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0190**	0.0100	mg/L	1		02/17/21 1806	02/17/21 1911	DJM

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DB11000	DB11000-BS1	
		DB11000-BLK1	
		DB11000-DUP1	D1B1444-01
		DB11000-MS2	D1B1474-01
		D1B1474-01	Well #1S
		D1B1474-03	Well #6S
		D1B1474-05	Well #6D
		D1B1474-07	Well #475
		DB11000-MS1	D1B1444-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DB11016	DB11016-BS1	
		DB11016-BLK1	
		D1B1474-02	Well #1S (filtered)
		DB11016-DUP1	D1B1474-02
		DB11016-MS1	D1B1474-02
		D1B1474-04	Well #6S (filtered)
		D1B1474-06	Well #6D (filtered)
		D1B1474-08	Well #475 (filtered)

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DB11000 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DB11000-BLK1)			Prepared: 02/17/2021 Analyzed: 02/18/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DB11000-BS1)			Prepared: 02/17/2021 Analyzed: 02/18/2021							
Phosphorus - Total as P	0.982	0.0106	mg/L	1.00		98.2	90-110			
Duplicate (DB11000-DUP1)		**Source: D1B1444-01**	Prepared: 02/17/2021 Analyzed: 02/18/2021							
Phosphorus - Total as P	0.757	0.0106	mg/L		0.772			2.08	20	
Matrix Spike (DB11000-MS1)		**Source: D1B1444-01**	Prepared: 02/17/2021 Analyzed: 02/18/2021							
Phosphorus - Total as P	2.00	0.0213	mg/L	1.25	0.772	98.5	90-110			
Matrix Spike (DB11000-MS2)		**Source: D1B1474-01**	Prepared: 02/17/2021 Analyzed: 02/18/2021							
Phosphorus - Total as P	1.19	0.0106	mg/L	1.25	0.00956	94.0	90-110			
Batch DB11016 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DB11016-BLK1)			Prepared & Analyzed: 02/17/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DB11016-BS1)			Prepared & Analyzed: 02/17/2021							
Ortho-phosphate as P	0.997	0.0100	mg/L	1.00		99.6	90-110			

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1B1474

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DB11016 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Duplicate (DB11016-DUP1)	**Source: D1B1474-02**		Prepared & Analyzed: 02/17/2021							
Ortho-phosphate as P	0.0120	0.0100	mg/L		0.0120			0.00	20	
Matrix Spike (DB11016-MS1)	**Source: D1B1474-02**		Prepared & Analyzed: 02/17/2021							
Ortho-phosphate as P	0.964	0.0100	mg/L	1.00	0.0120	95.1	90-110			

Definitions

mg/L: Milligrams per Liter
RL: Reporting Limit
RPD: Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 1.2°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville
M-CT008 Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Melisa L. Montgomery
Quality Assurance Officer
Reported: 02/19/2021 16:43

MICROBAC

61 Lo
Tel:

D 1 B 1 4 7 4

W & C - Plymouth

FOR LAB USE ONLY

Lab WO#

Project Manager hkm

Microbac Laboratories, Inc.

Copy of Report To

CUSTOMER:	WOODARD & CURRAN, INC.	BILL TO:	WOODARD & CURRAN, INC.
ADDRESS:	131 CAMELOT DRIVE	ADDRESS:	131 CAMELOT DRIVE
	PLYMOUTH, MA 02360		PLYMOUTH, MA
DELIVERY:	ROBERT SCOTT	PURCHASE ORDER #	
E-MAIL:	[redacted]	ATTENTION:	ACCOUNTS PAYABLE
PHONE:	508-830-4159 FAX: 508-732-0238	PHONE:	508-830-4159

Project Information

PROJECT:	PLYMOUTH, MA WWTP
LOCATION:	ID 11773
	Wells - Monthly TP & Ortho-P
ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL	ROBERT SCOTT
PHONE:	CELL - 860-204-7988
FAX:	508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TOTAL PHOS.	Analysis: ORTHO-PHOS	Preservatives: NON-PRES	Preservatives: HS2O4	Preservatives: HCL	Preservatives: HNO3	Preservatives: OTHER
Well # 1S (250 mL)	2/17/2021	11:47		X	WW	1	X			X			
Well # 1S (250 mL) (filtered)	2/17/2021	11:47		X	WW	1		X	X				
Well # 6S (250 mL)	2/17/2021	9:06		X	WW	1	X			X			
Well # 6S (250 mL) (filtered)	2/17/2021	9:06		X	WW	1		X	X				
Well # 6D (250 mL)	2/17/2021	9:58		X	WW	1	X			X			
Well # 6D (250 mL) (filtered)	2/17/2021	9:58		X	WW	1		X	X				
Well # 475 (250 mL)	2/17/2021	10:45		X	WW	1	X			X			
Well # 475 (250 mL) (filtered)	2/17/2021	10:45		X	WW	1		X	X				

PRESERVATIVE VERIFIED Initials KG

CUSTODY TRANSFER	DATE	TIME
SAMPLER: Steven Wheeler	2/12/21	13:47
RECEIVED:		
RELINQUISHED: Steven Wheeler	2/17/21	14:07
RECEIVED: Keith Mean	2-17-21	14:07
RELINQUISHED: Keith Mean	2-17-21	15:59
RECEIVED:	2-17-21	1559

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☒ AMBIENT ☐

1.2°C KG

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1B2044

Project Description

Wells - Monthly TP & OP

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Friday, February 26, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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CERTIFICATE OF ANALYSIS

D1B2044

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Monthly TP & OP

Project / PO Number: 346346
Received: 02/24/2021
Reported: 02/26/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well #A9	D1B2044-01	Groundwater	Grab		02/24/21 09:27	02/24/21 15:05
Well #A9 (filtered)	D1B2044-02	Groundwater	Grab		02/24/21 09:27	02/24/21 15:05
Well #A10	D1B2044-03	Groundwater	Grab		02/24/21 10:48	02/24/21 15:05
Well #A10 (filtered)	D1B2044-04	Groundwater	Grab		02/24/21 10:48	02/24/21 15:05

CERTIFICATE OF ANALYSIS

D1B2044

Analytical Testing Parameters

Client Sample ID: Well #A9
Sample Matrix: Groundwater
Lab Sample ID: D1B2044-01
Collected By: Customer
Collection Date: 02/24/2021 9:27

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0244**	0.0106	mg/L	1		02/25/21 2000	02/26/21 0924	CLW

Client Sample ID: Well #A9 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1B2044-02
Collected By: Customer
Collection Date: 02/24/2021 9:27

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0250**	0.0100	mg/L	1		02/24/21 1734	02/24/21 1837	DJM

Client Sample ID: Well #A10
Sample Matrix: Groundwater
Lab Sample ID: D1B2044-03
Collected By: Customer
Collection Date: 02/24/2021 10:48

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	<0.0106	0.0106	mg/L	1		02/25/21 2000	02/26/21 0929	CLW

Client Sample ID: Well #A10 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1B2044-04
Collected By: Customer
Collection Date: 02/24/2021 10:48

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	<0.0100	0.0100	mg/L	1		02/24/21 1734	02/24/21 1834	DJM

CERTIFICATE OF ANALYSIS

D1B2044

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DB11422	DB11422-BS1	
		D1B2044-04	Well #A10 (filtered)
		DB11422-BLK1	
		DB11422-MS1	D1B2044-04
		DB11422-DUP1	D1B2044-04
		D1B2044-02	Well #A9 (filtered)

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DB11480	DB11480-BS1	
		DB11480-BLK1	
		D1B2044-01	Well #A9
		DB11480-DUP1	D1B2044-01
		DB11480-MS1	D1B2044-01
		DB11480-MS2	D1B2106-02
		D1B2044-03	Well #A10

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DB11422 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DB11422-BLK1)			Prepared & Analyzed: 02/24/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DB11422-BS1)			Prepared & Analyzed: 02/24/2021							
Ortho-phosphate as P	0.986	0.0100	mg/L	1.00		98.5	90-110			
Duplicate (DB11422-DUP1)	**Source: D1B2044-04**		Prepared & Analyzed: 02/24/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L		0.00500			0.00	20	
Matrix Spike (DB11422-MS1)	**Source: D1B2044-04**		Prepared & Analyzed: 02/24/2021							
Ortho-phosphate as P	0.986	0.0100	mg/L	1.00	0.00500	98.0	90-110			
Batch DB11480 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DB11480-BLK1)			Prepared: 02/25/2021 Analyzed: 02/26/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DB11480-BS1)			Prepared: 02/25/2021 Analyzed: 02/26/2021							
Phosphorus - Total as P	0.976	0.0106	mg/L	1.00		97.6	90-110			
Duplicate (DB11480-DUP1)	**Source: D1B2044-01**		Prepared: 02/25/2021 Analyzed: 02/26/2021							
Phosphorus - Total as P	0.0244	0.0106	mg/L		0.0244			0.00	20	
Matrix Spike (DB11480-MS1)	**Source: D1B2044-01**		Prepared: 02/25/2021 Analyzed: 02/26/2021							
Phosphorus - Total as P	1.23	0.0106	mg/L	1.25	0.0244	96.3	90-110			
Matrix Spike (DB11480-MS2)	**Source: D1B2106-02**		Prepared: 02/25/2021 Analyzed: 02/26/2021							
Phosphorus - Total as P	1.58	0.0106	mg/L	1.25	0.407	94.0	90-110			

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1B2044

Definitions

mg/L:	Milligrams per Liter
RL:	Reporting Limit
RPD:	Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.1°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008 Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Melisa L. Montgomery
Quality Assurance Officer
Reported: 02/26/2021 14:31

MICROBAC

CHA

61 Louisa
Tel: (860

D 1 B 2 0 4 4

W & C - Plymouth

Microbac Laboratories, Inc.

FOR LAB USE ONLY

Lab WO#

Project Manager

Copy of Report To

CUSTOMER: **WOODARD & CURRAN, INC.**

ADDRESS: **131 CAMELOT DRIVE**

PLYMOUTH, MA 02360

DELIVERY: **ROBERT SCOTT**

E-MAIL: [redacted]

PHONE: 508-830-4159 FAX: 508-732-0238

Send To: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA

PURCHASE ORDER #

ATTENTION: ACCOUNTS PAYABLE

PHONE: 508-830-4159

Project Information

PROJECT: **PLYMOUTH, MA WWTP**

LOCATION: **ID 11773**

Wells - Monthly TP & Ortho-P

ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL

ROBERT SCOTT

PHONE: CELL - 860-204-7988

FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TOTAL PHOS.	Analysis: ORTHO-PHOS	Preservatives: NON-PRES	Preservatives: HS2O4	Preservatives: HCL	Preservatives: HNO3	Preservatives: OTHER
Well # A9 (250 mL)	**2/24/2021**	**9:27**		X	WW	1	X			X			
Well # A9 (250 mL) (filtered)	**2/24/2021**	**9:27**		X	WW	1		X	X				
Well # A10 (250 mL)	**2/24/2021**	**10:48**		X	WW	1	X			X			
Well # A10 (250 mL) (filtered)	**2/24/2021**	**10:48**		X	WW	1		X	X				

CUSTODY TRANSFER	DATE	TIME
SAMPLER: Steven Whelan	2/24/21	10:48
RECEIVED:		
RELINQUISHED: Steven Whelan	2/24/21	13:14
ECEIVED:	224-21	1314
ELINQUISHED:	224-21	1505
ECEIVED:	2-24-21	1505

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

VERIFIED Initials

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☑ AMBIENT ☐ 3.1°C

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1C1166

Project Description

Wells - Monthly TO & OP

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Friday, March 12, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1C1166

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Monthly TO & OP

Project / PO Number: 346346
Received: 03/10/2021
Reported: 03/12/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well #1S	D1C1166-01	Groundwater	Grab		03/10/21 11:57	03/10/21 17:00
Well #1S (filtered)	D1C1166-02	Groundwater	Grab		03/10/21 11:57	03/10/21 17:00
Well #A9	D1C1166-03	Groundwater	Grab		03/10/21 11:15	03/10/21 17:00
Well #A9 (filtered)	D1C1166-04	Groundwater	Grab		03/10/21 11:15	03/10/21 17:00
Well #6S	D1C1166-05	Groundwater	Grab		03/10/21 08:18	03/10/21 17:00
Well #6S (filtered)	D1C1166-06	Groundwater	Grab		03/10/21 08:18	03/10/21 17:00
Well #6D	D1C1166-07	Groundwater	Grab		03/10/21 09:08	03/10/21 17:00
Well #6D (filtered)	D1C1166-08	Groundwater	Grab		03/10/21 09:08	03/10/21 17:00
Well #475	D1C1166-09	Groundwater	Grab		03/10/21 09:55	03/10/21 17:00
Well #475 (filtered)	D1C1166-10	Groundwater	Grab		03/10/21 09:55	03/10/21 17:00

CERTIFICATE OF ANALYSIS

D1C1166

Analytical Testing Parameters

Client Sample ID: Well #1S
Sample Matrix: Groundwater
Lab Sample ID: D1C1166-01
Collected By: Customer
Collection Date: 03/10/2021 11:57

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0128**	0.0106	mg/L	1		03/11/21 1900	03/12/21 0934	CLW

Client Sample ID: Well #1S (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1C1166-02
Collected By: Customer
Collection Date: 03/10/2021 11:57

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	<0.0100	0.0100	mg/L	1	**R3**	03/10/21 1759	03/10/21 1928	DJM

Client Sample ID: Well #A9
Sample Matrix: Groundwater
Lab Sample ID: D1C1166-03
Collected By: Customer
Collection Date: 03/10/2021 11:15

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0276**	0.0106	mg/L	1		03/11/21 1900	03/12/21 0935	CLW

Client Sample ID: Well #A9 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1C1166-04
Collected By: Customer
Collection Date: 03/10/2021 11:15

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0210**	0.0100	mg/L	1		03/10/21 1759	03/10/21 1931	DJM

Client Sample ID: Well #6S
Sample Matrix: Groundwater
Lab Sample ID: D1C1166-05
Collected By: Customer
Collection Date: 03/10/2021 8:18

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	<0.0106	0.0106	mg/L	1		03/11/21 1900	03/12/21 0935	CLW

CERTIFICATE OF ANALYSIS

D1C1166

Client Sample ID: Well #6S (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1C1166-06
Collected By: Customer
Collection Date: 03/10/2021 8:18

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	<0.0100	0.0100	mg/L	1		03/10/21 1759	03/10/21 1932	DJM

Client Sample ID: Well #6D
Sample Matrix: Groundwater
Lab Sample ID: D1C1166-07
Collected By: Customer
Collection Date: 03/10/2021 9:08

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0213**	0.0106	mg/L	1		03/11/21 1900	03/12/21 0937	CLW

Client Sample ID: Well #6D (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1C1166-08
Collected By: Customer
Collection Date: 03/10/2021 9:08

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0150**	0.0100	mg/L	1		03/10/21 1759	03/10/21 1933	DJM

Client Sample ID: Well #475
Sample Matrix: Groundwater
Lab Sample ID: D1C1166-09
Collected By: Customer
Collection Date: 03/10/2021 9:55

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0170**	0.0106	mg/L	1		03/11/21 1900	03/12/21 0938	CLW

Client Sample ID: Well #475 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1C1166-10
Collected By: Customer
Collection Date: 03/10/2021 9:55

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0190**	0.0100	mg/L	1		03/10/21 1759	03/10/21 1934	DJM

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DC10711	DC10711-BS1	
		DC10711-BLK1	
		D1C1166-02	Well #1S (filtered)
		DC10711-DUP1	D1C1166-02
		DC10711-MS1	D1C1166-02
		D1C1166-04	Well #A9 (filtered)
		DC10711-MS2	D1C1166-04
		D1C1166-06	Well #6S (filtered)
		D1C1166-08	Well #6D (filtered)
		D1C1166-10	Well #475 (filtered)

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DC10798	DC10798-BS1	
		DC10798-BLK1	
		DC10798-DUP1	D1C1258-01
		DC10798-MS1	D1C1258-01
		DC10798-MS2	L1C0191-01
		D1C1166-01	Well #1S
		D1C1166-03	Well #A9
		D1C1166-05	Well #6S
		D1C1166-07	Well #6D
		D1C1166-09	Well #475

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DC10711 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DC10711-BLK1)			Prepared & Analyzed: 03/10/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DC10711-BS1)			Prepared & Analyzed: 03/10/2021							
Ortho-phosphate as P	0.976	0.0100	mg/L	1.00		97.5	90-110			
Duplicate (DC10711-DUP1)	**Source: D1C1166-02**		Prepared & Analyzed: 03/10/2021							
Ortho-phosphate as P	0.0100	0.0100	mg/L		0.00700			35.3	20	R3
Matrix Spike (DC10711-MS1)	**Source: D1C1166-02**		Prepared & Analyzed: 03/10/2021							
Ortho-phosphate as P	0.978	0.0100	mg/L	1.00	0.00700	97.0	90-110			
Matrix Spike (DC10711-MS2)	**Source: D1C1166-04**		Prepared & Analyzed: 03/10/2021							
Ortho-phosphate as P	0.993	0.0100	mg/L	1.00	0.0210	97.1	90-110			
Batch DC10798 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DC10798-BLK1)			Prepared: 03/11/2021 Analyzed: 03/12/2021							

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1C1166

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DC10798 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DC10798-BLK1)			Prepared: 03/11/2021 Analyzed: 03/12/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DC10798-BS1)			Prepared: 03/11/2021 Analyzed: 03/12/2021							
Phosphorus - Total as P	0.985	0.0106	mg/L	1.00		98.5	90-110			
Duplicate (DC10798-DUP1)		**Source: D1C1258-01**	Prepared: 03/11/2021 Analyzed: 03/12/2021							
Phosphorus - Total as P	0.232	0.0106	mg/L		0.238			2.71	20	
Matrix Spike (DC10798-MS1)		**Source: D1C1258-01**	Prepared: 03/11/2021 Analyzed: 03/12/2021							
Phosphorus - Total as P	1.45	0.0106	mg/L	1.25	0.238	97.2	90-110			
Matrix Spike (DC10798-MS2)		**Source: L1C0191-01**	Prepared: 03/11/2021 Analyzed: 03/12/2021							
Phosphorus - Total as P	1.32	0.0106	mg/L	1.25	0.108	96.8	90-110			

Definitions

mg/L: Milligrams per Liter

R3: Duplicate RPD is outside of acceptance criteria. The difference between the results is less than 2x Method Reporting Limit.

RL: Reporting Limit

RPD: Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 4.0°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008 Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Melisa L. Montgomery

Quality Assurance Officer

Reported: 03/12/2021 16:24

MICROBAC

D 1 C 1 1 6 6

W & C - Plymouth

Microbac Laboratories, Inc.

FOR LAB USE ONLY

Lab WO#

Project Manager

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

DELIVERY: ROBERT SCOTT

E-MAIL: [redacted]

PHONE: 508-830-4159 FAX: 508-732-0238

BILL TO: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA

PURCHASE ORDER #

ATTENTION: ACCOUNTS PAYABLE

PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP

LOCATION: ID 11773

Wells - Monthly TP & Ortho-P

ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL

ROBERT SCOTT

PHONE: CELL - 860-204-7988

FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TOTAL PHOS.	Analysis: ORTHO-PHOS	Preservatives: NON-PRES	Preservatives: HS2O4	Preservatives: HCL	Preservatives: HNO3	Preservatives: OTHER
Well # 1S (250 mL)	3/10/21	11:57		X	WW	1	X			X			
Well # 1S (250 mL) (filtered)	3/10/21	11:57		X	WW	1		X	X				
Well # A9 (250 mL)	3/10/21	11:15		X	WW	1	X			X			
Well # A9 (250 mL) (filtered)	3/10/21	11:15		X	WW	1		X	X				
Well # 6S (250 mL)	3/10/21	8:18		X	WW	1	X			X			
Well # 6S (250 mL) (filtered)	3/10/21	8:18		X	WW	1		X	X				
Well # 6D (250 mL)	3/10/21	9:08		X	WW	1	X			X			
Well # 6D (250 mL) (filtered)	3/10/21	9:08		X	WW	1		X	X				
Well # 475 (250 mL)	3/10/21	9:55		X	WW	1	X			X			
Well # 475 (250 mL) (filtered)	3/10/21	9:55		X	WW	1		X	X				

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	3/10/21	11:57
RECEIVED:		
RELINQUISHED:	3/10/21	1469
RECEIVED:	3.10.2021	1409
RELINQUISHED:	3-10-2021	1700
RECEIVED:	3-10-21	1700

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☐ AMBIENT ☐ 4.0°C

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1C1757

Project Description

Wells - Monthly TP & OP

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Thursday, March 18, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1C1757

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Monthly TP & OP

Project / PO Number: 346346
Received: 03/16/2021
Reported: 03/18/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well A8	D1C1757-01	Groundwater	Grab		03/16/21 11:12	03/16/21 16:12
Well A8 (filtered)	D1C1757-02	Groundwater	Grab		03/16/21 11:12	03/16/21 16:12
Well A10	D1C1757-03	Groundwater	Grab		03/16/21 09:31	03/16/21 16:12
Well A10 (filtered)	D1C1757-04	Groundwater	Grab		03/16/21 09:31	03/16/21 16:12
Well A16	D1C1757-05	Groundwater	Grab		03/16/21 11:55	03/16/21 16:12
Well A16 (filtered)	D1C1757-06	Groundwater	Grab		03/16/21 11:55	03/16/21 16:12

CERTIFICATE OF ANALYSIS

D1C1757

Analytical Testing Parameters

Client Sample ID: Well A8
Sample Matrix: Groundwater
Lab Sample ID: D1C1757-01
Collected By: Customer
Collection Date: 03/16/2021 11:12

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**2.74**	0.0213	mg/L	2		03/17/21 1915	03/18/21 1054	CLW

Client Sample ID: Well A8 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1C1757-02
Collected By: Customer
Collection Date: 03/16/2021 11:12

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**2.75**	0.0200	mg/L	2		03/16/21 1819	03/16/21 2105	DJM

Client Sample ID: Well A10
Sample Matrix: Groundwater
Lab Sample ID: D1C1757-03
Collected By: Customer
Collection Date: 03/16/2021 9:31

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	<0.0106	0.0106	mg/L	1		03/17/21 1915	03/18/21 1013	CLW

Client Sample ID: Well A10 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1C1757-04
Collected By: Customer
Collection Date: 03/16/2021 9:31

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	<0.0100	0.0100	mg/L	1		03/16/21 1819	03/16/21 2046	DJM

Client Sample ID: Well A16
Sample Matrix: Groundwater
Lab Sample ID: D1C1757-05
Collected By: Customer
Collection Date: 03/16/2021 11:55

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	<0.0106	0.0106	mg/L	1		03/17/21 1915	03/18/21 1014	CLW

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1C1757

Client Sample ID:	Well A16 (filtered)		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1C1757-06	**Collection Date:**	03/16/2021 11:55

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0140**	0.0100	mg/L	1		03/16/21 1819	03/16/21 2052	DJM

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DC11055	DC11055-BS1	
		DC11055-BLK1	
		D1C1757-04	Well A10 (filtered)
		DC11055-MS2	D1C1757-04
		D1C1757-06	Well A16 (filtered)
		D1C1757-02	Well A8 (filtered)
		DC11055-DUP1	D1C1757-02
		DC11055-MS1	D1C1757-02

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DC11131	DC11131-BS1	
		DC11131-BLK1	
		DC11131-DUP1	D1C1855-01
		D1C1757-03	Well A10
		D1C1757-05	Well A16
		D1C1757-01	Well A8
		DC11131-MS2	D1C1905-02
		DC11131-MS1	D1C1855-01

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DC11055 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DC11055-BLK1)			Prepared & Analyzed: 03/16/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DC11055-BS1)			Prepared & Analyzed: 03/16/2021							
Ortho-phosphate as P	0.982	0.0100	mg/L	1.00		98.1	90-110			
Duplicate (DC11055-DUP1)		**Source: D1C1757-02**	Prepared & Analyzed: 03/16/2021							
Ortho-phosphate as P	2.76	0.0200	mg/L		2.75			0.399	20	
Matrix Spike (DC11055-MS1)		**Source: D1C1757-02**	Prepared & Analyzed: 03/16/2021							
Ortho-phosphate as P	3.76	0.0400	mg/L	1.00	2.75	101	90-110			
Matrix Spike (DC11055-MS2)		**Source: D1C1757-04**	Prepared & Analyzed: 03/16/2021							
Ortho-phosphate as P	0.976	0.0100	mg/L	1.00	0.00600	96.9	90-110			
Batch DC11131 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DC11131-BLK1)			Prepared: 03/17/2021 Analyzed: 03/18/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DC11131-BS1)			Prepared: 03/17/2021 Analyzed: 03/18/2021							
Phosphorus - Total as P	0.963	0.0106	mg/L	1.00		96.3	90-110			
Duplicate (DC11131-DUP1)		**Source: D1C1855-01**	Prepared: 03/17/2021 Analyzed: 03/18/2021							

CERTIFICATE OF ANALYSIS

D1C1757

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DC11131 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Duplicate (DC11131-DUP1)		**Source: D1C1855-01**	Prepared: 03/17/2021 Analyzed: 03/18/2021							
Phosphorus - Total as P	0.0170	0.0106	mg/L		0.0202			17.1	20	
Matrix Spike (DC11131-MS1)		**Source: D1C1855-01**	Prepared: 03/17/2021 Analyzed: 03/18/2021							
Phosphorus - Total as P	1.19	0.0106	mg/L	1.25	0.0202	93.2	90-110			
Matrix Spike (DC11131-MS2)		**Source: D1C1905-02**	Prepared: 03/17/2021 Analyzed: 03/18/2021							
Phosphorus - Total as P	4.06	0.0425	mg/L	1.25	2.78	103	90-110			

Definitions

mg/L: Milligrams per Liter
RL: Reporting Limit
RPD: Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.3°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville
M-CT008 Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Melisa L. Montgomery
Quality Assurance Officer
Reported: 03/18/2021 16:28

MICROBAC

61 Lo
Tel:

D 1 C 1 7 5 7

W & C - Plymouth

Microbac Laboratories, Inc.

FOR LAB USE ONLY

Lab WO#

Project Manager ub

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

DELIVERY: ROBERT SCOTT

E-MAIL: [redacted]

PHONE: 508-830-4159 FAX: 508-732-0238

Billing Information

BILL TO: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA

PURCHASE ORDER #

ATTENTION: ACCOUNTS PAYABLE

PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP

LOCATION: ID 11773

Wells - Monthly TP & Ortho-P

ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL

ROBERT SCOTT

PHONE: CELL - 860-204-7988

FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TOTAL PHOS.	Analysis: ORTHO-PHOS	Preservatives: NON-PRES	Preservatives: HS2O4	Preservatives: HCL	Preservatives: HNO3	Preservatives: OTHER
Well # A8 (250 mL)	3/16/2021	11:12		X	WW	1	X			X			
Well # A8 (250 mL) (filtered)	3/16/2021	11:12		X	WW	1		X	X				
Well # A10 (250 mL)	3/16/2021	9:31		X	WW	1	X			X			
Well # A10 (250 mL) (filtered)	3/16/2021	9:31		X	WW	1		X	X				
Well # A16 (250 mL)	3/16/2021	11:55		X	WW	1	X			X			
Well # A16 (250 mL) (filtered)	3/16/2021	11:55		X	WW	1		X	X				

PRESERVATIVE VERIFIED Initials KG

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	3/16/21	931
RECEIVED:		
RELINQUISHED:	3/16/21	1311
RECEIVED:	3-16-21	1311
RELINQUISHED:	3-16-21	16:12
RECEIVED:	3-16-21	1612

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☒ AMBIENT ☐

3.3°C KG.

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1C2001

Project Description

Wells - Monthly TP & Ortho-P

For:

Jesse Freeman

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Director

Ronald L. Warila

Friday, March 19, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

MICROBAC®

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1C2001

Woodard & Curran, Inc. - Plymouth

Jesse Freeman
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Monthly TP & Ortho-P

Project / PO Number: 346346
Received: 03/18/2021
Reported: 03/19/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well #A11	D1C2001-01	Groundwater	Grab		03/18/21 07:53	03/18/21 17:06
Well #A11 (filtered)	D1C2001-02	Groundwater	Grab		03/18/21 07:53	03/18/21 17:06

CERTIFICATE OF ANALYSIS

D1C2001

Analytical Testing Parameters

Client Sample ID:	Well #A11		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1C2001-01	**Collection Date:**	03/18/2021 7:53

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0372**	0.0106	mg/L	1		03/18/21 1815	03/19/21 0918	CLW

Client Sample ID:	Well #A11 (filtered)		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1C2001-02	**Collection Date:**	03/18/2021 7:53

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0230**	0.0100	mg/L	1		03/18/21 1804	03/18/21 2039	DJM

CERTIFICATE OF ANALYSIS

D1C2001

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DC11191	DC11191-BS1	
		DC11191-BLK1	
		DC11191-DUP1	L1C0265-01
		DC11191-MS1	L1C0265-01
		D1C2001-01	Well #A11
		DC11191-MS2	L1C0296-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DC11219	DC11219-BS1	
		D1C2001-02	Well #A11 (filtered)
		DC11219-DUP1	D1C2001-02
		DC11219-MS1	D1C2001-02
		DC11219-BLK1	

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DC11191 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DC11191-BLK1)			Prepared: 03/18/2021 Analyzed: 03/19/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DC11191-BS1)			Prepared: 03/18/2021 Analyzed: 03/19/2021							
Phosphorus - Total as P	0.966	0.0106	mg/L	1.00		96.6	90-110			
Duplicate (DC11191-DUP1)		**Source: L1C0265-01**	Prepared: 03/18/2021 Analyzed: 03/19/2021							
Phosphorus - Total as P	0.134	0.0106	mg/L		0.133			0.797	20	
Matrix Spike (DC11191-MS1)		**Source: L1C0265-01**	Prepared: 03/18/2021 Analyzed: 03/19/2021							
Phosphorus - Total as P	1.33	0.0106	mg/L	1.25	0.133	95.7	90-110			
Matrix Spike (DC11191-MS2)		**Source: L1C0296-01**	Prepared: 03/18/2021 Analyzed: 03/19/2021							
Phosphorus - Total as P	2.01	0.0213	mg/L	1.25	0.779	98.5	90-110			
Batch DC11219 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DC11219-BLK1)			Prepared & Analyzed: 03/18/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DC11219-BS1)			Prepared & Analyzed: 03/18/2021							
Ortho-phosphate as P	1.01	0.0100	mg/L	1.00		101	90-110			
Duplicate (DC11219-DUP1)		**Source: D1C2001-02**	Prepared & Analyzed: 03/18/2021							
Ortho-phosphate as P	0.0250	0.0100	mg/L		0.0230			8.33	20	
Matrix Spike (DC11219-MS1)		**Source: D1C2001-02**	Prepared & Analyzed: 03/18/2021							
Ortho-phosphate as P	1.01	0.0100	mg/L	1.00	0.0230	98.6	90-110			

MICROBAC®

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1C2001

Definitions

mg/L:	Milligrams per Liter
RL:	Reporting Limit
RPD:	Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 2.9ºC

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008 Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Ronald L. Warila

Director

Reported: 03/19/2021 14:08

MICROBAC

61 Lo
Tel: (

D 1 C 2 0 0 1

W & C - Plymouth

Microbac Laboratories, Inc.

FOR LAB USE ONLY

Lab WO#

Project Manager

Copy of Report To

CUSTOMER: **WOODARD & CURRAN, INC.**

ADDRESS: **131 CAMELOT DRIVE**

PLYMOUTH, MA 02360

DELIVERY: **ROBERT SCOTT**

E-MAIL: [redacted]

PHONE: 508-830-4159 FAX: 508-732-0238

BILL TO: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA

PURCHASE ORDER #

ATTENTION: ACCOUNTS PAYABLE

PHONE: 508-830-4159

Project Information

PROJECT: **PLYMOUTH, MA WWTP**

LOCATION: **ID 11773**

Wells - Monthly TP & Ortho-P

ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL

ROBERT SCOTT

PHONE: CELL - 860-204-7988

FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TOTAL PHOS.	Analysis: ORTHO-PHOS	Preservatives: NON-PRES	Preservatives: HS2O4	Preservatives: HCL	Preservatives: HNO3	Preservatives: OTHER
Well # A11 (250 mL)	**3/18/2021**	**7:53**		X	WW	1	X			X			
Well # A11 (250 mL) (filtered)	**3/18/2021**	**7:53**		X	WW	1		X	X				

PRESERVATIVE VERIFIED Initials KG.

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	3/18/21	753
RECEIVED:		
RELINQUISHED:	3/18/21	1412
ECEIVED: Keith Mason	3-18-21	1412
ELINQUISHED: Keith Mason	3-18-21	17:06
ECEIVED:	3/18/21	1706

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☒ AMBIENT ☐

2.9°C KG.

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1D0983

Project Description

Wells - Quarterly

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630



Director

Ronald L. Warila

Wednesday, April 14, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

MICROBAC®

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1D0983

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Quarterly

Project / PO Number: 346346
Received: 04/08/2021
Reported: 04/14/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well A8	D1D0983-01	Groundwater	Grab		04/08/21 11:18	04/08/21 17:00
Well A8	D1D0983-02	Groundwater	Grab		04/08/21 11:18	04/08/21 17:00
Well A8 (filtered)	D1D0983-03	Groundwater	Grab		04/08/21 11:18	04/08/21 17:00
Well A8	D1D0983-04	Groundwater	Grab		04/08/21 11:18	04/08/21 17:00
Well A8	D1D0983-05	Groundwater	Grab		04/08/21 11:18	04/08/21 17:00
Well A8	D1D0983-06	Groundwater	Grab		04/08/21 11:18	04/08/21 17:00
Well A8	D1D0983-07	Groundwater	Grab		04/08/21 11:18	04/08/21 17:00
Well A8	D1D0983-08	Groundwater	Grab		04/08/21 11:18	04/08/21 17:00

CERTIFICATE OF ANALYSIS

D1D0983

Analytical Testing Parameters

Client Sample ID: Well A8
Sample Matrix: Groundwater
Lab Sample ID: D1D0983-01
Collected By: Customer
Collection Date: 04/08/2021 11:18

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 351.1								
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L	1		04/13/21 0955	04/13/21 1730	CLW
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**4.94**	0.0425	mg/L	4		04/12/21 1800	04/13/21 1434	CLW

Client Sample ID: Well A8
Sample Matrix: Groundwater
Lab Sample ID: D1D0983-02
Collected By: Customer
Collection Date: 04/08/2021 11:18

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-NO_3^- F-2011								
Nitrate as N	**2.10**	0.0500	mg/L	1			04/08/21 1929	DJM
Nitrite as N	<0.0100	0.0100	mg/L	1	**Y1**		04/08/21 1929	DJM

Client Sample ID: Well A8 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1D0983-03
Collected By: Customer
Collection Date: 04/08/2021 11:18

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**4.63**	0.0400	mg/L	4		04/08/21 1818	04/08/21 2008	DJM

Client Sample ID: Well A8
Sample Matrix: Groundwater
Lab Sample ID: D1D0983-04
Collected By: Customer
Collection Date: 04/08/2021 11:18

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 2320 B-2011								
Alkalinity to pH 4.5	**67.5**	1.00	mg CaCO3/L	1			04/12/21 1600	SRF

Client Sample ID: Well A8
Sample Matrix: Groundwater
Lab Sample ID: D1D0983-05
Collected By: Customer
Collection Date: 04/08/2021 11:18

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-Cl E-2011								
Chloride	**97.4**	4.00	mg/L	2			04/13/21 1520	CLW

CERTIFICATE OF ANALYSIS

D1D0983

Client Sample ID:	Well A8		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D0983-06	**Collection Date:**	04/08/2021 11:18

Metals Total by ICP	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.7, Rv. 4.4 (1994)								
Boron	**0.0605**	0.0050	mg/L	1	**Y1**	04/12/21 1441	04/13/21 1847	JDF
Copper	<0.0020	0.0020	mg/L	1		04/12/21 1441	04/13/21 1847	JDF
Sodium	**81.2**	1.00	mg/L	1		04/12/21 1441	04/13/21 1847	JDF

Client Sample ID:	Well A8		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D0983-07	**Collection Date:**	04/08/2021 11:18

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acrolein	<20.0	20.0	ug/L	1			04/09/21 2331	JAN
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	1			04/09/21 2331	JAN
Surrogate: 1,2-Dichloroethane-d4	100	Limit: 70-130	% Rec	1			04/09/21 2331	JAN
Surrogate: Toluene-d8	106	Limit: 70-130	% Rec	1			04/09/21 2331	JAN
Surrogate: Pentafluorobenzene	103	Limit: 70-130	% Rec	1			04/09/21 2331	JAN

CERTIFICATE OF ANALYSIS

D1D0983

Client Sample ID:	Well A8		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D0983-08	**Collection Date:**	04/08/2021 11:18

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acetone	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1702	JAN
Acrylonitrile	<20.0	20.0	ug/L	1			04/12/21 1702	JAN
Benzene	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
Bromodichloromethane	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
Bromoform	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
Bromomethane	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
2-Butanone (MEK)	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1702	JAN
Carbon disulfide	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1702	JAN
Carbon tetrachloride	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
Chlorobenzene	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
Chloroform	<4.00	4.00	ug/L	1			04/12/21 1702	JAN
Chloromethane	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
Dibromochloromethane	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1702	JAN
1,2-Dichlorobenzene	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
1,3-Dichlorobenzene	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
1,4-Dichlorobenzene	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1702	JAN
1,2-Dichloroethane	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
1,1-Dichloroethane	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
cis-1,2-Dichloroethene	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1702	JAN
1,1-Dichloroethene	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
trans-1,2-Dichloroethene	<4.00	4.00	ug/L	1			04/12/21 1702	JAN
1,2-Dichloropropane	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
cis-1,3-Dichloropropene	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
trans-1,3-Dichloropropene	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
Ethylbenzene	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
2-Hexanone (MBK)	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1702	JAN
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1702	JAN
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L	1			04/12/21 1702	JAN
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1702	JAN
Styrene	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1702	JAN
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
Tetrachloroethene	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
Toluene	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
1,1,2-Trichloroethane	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
1,1,1-Trichloroethane	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
Trichloroethene	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
Vinyl chloride	<5.00	5.00	ug/L	1			04/12/21 1702	JAN
m,p-Xylene	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1702	JAN

CERTIFICATE OF ANALYSIS

D1D0983

Client Sample ID:	Well A8		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D0983-08	**Collection Date:**	04/08/2021 11:18

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
o-Xylene	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1702	JAN
Vinyl acetate	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1702	JAN
Surrogate: 1,2-Dichloroethane-d4	95.9	Limit: 70-130	% Rec	1			04/12/21 1702	JAN
Surrogate: Toluene-d8	105	Limit: 70-130	% Rec	1			04/12/21 1702	JAN
Surrogate: Pentafluorobenzene	100	Limit: 70-130	% Rec	1			04/12/21 1702	JAN

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-$NO3^-$ F-2011	DD10534	DD10534-BS1	
		DD10534-BS2	
		DD10534-BLK1	
		DD10534-BLK1	
		DD10534-DUP1	D1D0913-02
		DD10534-DUP1	D1D0913-02
		DD10534-MS1	D1D0913-02
		DD10534-MS1	D1D0913-02
		DD10534-MSD1	D1D0913-02
		DD10534-MSD1	D1D0913-02
		D1D0983-02	Well A8
		D1D0983-02	Well A8

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DD10566	DD10566-BLK1	
		DD10566-BS1	
		DD10566-DUP1	D1D0986-03
		DD10566-MS1	D1D0986-03
		DD10566-MS2	D1D0987-03
		D1D0983-03	Well A8 (filtered)

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.7, Rv. 4.4 (1994)	DD10670	DD10670-BLK1	
		DD10670-BS1	
		DD10670-DUP1	D1D0975-02
		DD10670-MS1	D1D0944-01
		D1D0983-06	Well A8
		D1D0983-06	Well A8
		DD10670-MS2	D1D0975-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DD10690	DD10690-BS1	
		DD10690-BLK1	
		DD10690-DUP1	D1D0991-05
		DD10690-MS1	D1D0991-05
		DD10690-MS2	L1D0148-01
		D1D0983-01	Well A8

Method	Batch	Laboratory ID	Client / Source ID
SM 2320 B-2011	DD10715	DD10715-BS1	
		DD10715-DUP1	D1D0984-04

SM 2320 B-2011	DD10715	DD10715-BLK1	
		D1D0983-04	Well A8

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-Cl E-2011	DD10734	DD10734-BS1	
		DD10734-BLK1	
		DD10734-DUP1	D1D1180-01
		DD10734-MS1	D1D1180-01
		DD10734-MSD1	D1D1180-01
		D1D0983-05	Well A8

Method	Batch	Laboratory ID	Client / Source ID
EPA 351.1	DD10756	DD10756-BS1	
		DD10756-DUP1	D1D0947-02
		DD10756-MS1	D1D0947-02
		DD10756-MS2	D1D0952-01
		D1D0983-01	Well A8
		DD10756-BLK1	

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DD10775	DD10775-BS1	
		DD10775-BLK1	
		DD10775-MS1	L1D0100-02
		DD10775-MSD1	L1D0100-02
		D1D0983-07	Well A8

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DD10776	DD10776-BS1	
		DD10776-BLK1	
		D1D0983-08	Well A8

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10534 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Blank (DD10534-BLK1)			Prepared & Analyzed: 04/08/2021							
Nitrite as N	<0.0100	0.0100	mg/L							
Nitrate as N	<0.0500	0.0500	mg/L							
LCS (DD10534-BS1)			Prepared & Analyzed: 04/08/2021							
Nitrate as N	5.04	0.0500	mg/L	5.00		101	90-110			
LCS (DD10534-BS2)			Prepared & Analyzed: 04/08/2021							
Nitrite as N	0.999	0.0100	mg/L	1.00		99.9	90-110			
Duplicate (DD10534-DUP1)	**Source: D1D0913-02**		Prepared & Analyzed: 04/08/2021							
Nitrite as N	<0.0100	0.0100	mg/L		0.00360			0.00	20	A5

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10534 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Duplicate (DD10534-DUP1)		**Source: D1D0913-02**	Prepared & Analyzed: 04/08/2021							
Nitrate as N	<0.0500	0.0500	mg/L		ND				20	A5
Matrix Spike (DD10534-MS1)		**Source: D1D0913-02**	Prepared & Analyzed: 04/08/2021							
Nitrite as N	0.979	0.0100	mg/L	1.00	0.00360	97.6	75-125			A5
Nitrate as N	4.92	0.0500	mg/L	5.00	ND	98.3	75-125			A5
Matrix Spike Dup (DD10534-MSD1)		**Source: D1D0913-02**	Prepared & Analyzed: 04/08/2021							
Nitrite as N	0.976	0.0100	mg/L	1.00	0.00360	97.3	75-125	0.317	20	A5
Nitrate as N	4.87	0.0500	mg/L	5.00	ND	97.5	75-125	0.854	20	A5
Batch DD10566 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DD10566-BLK1)			Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DD10566-BS1)			Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	0.985	0.0100	mg/L	1.00		98.4	90-110			
Duplicate (DD10566-DUP1)		**Source: D1D0986-03**	Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L		ND				20	
Matrix Spike (DD10566-MS1)		**Source: D1D0986-03**	Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	1.01	0.0100	mg/L	1.00	ND	101	90-110			
Matrix Spike (DD10566-MS2)		**Source: D1D0987-03**	Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	0.994	0.0100	mg/L	1.00	0.0130	98.0	90-110			
Batch DD10690 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DD10690-BLK1)			Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DD10690-BS1)			Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	1.01	0.0106	mg/L	1.00		101	90-110			
Duplicate (DD10690-DUP1)		**Source: D1D0991-05**	Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	0.0669	0.0106	mg/L		0.0616			8.26	20	
Matrix Spike (DD10690-MS1)		**Source: D1D0991-05**	Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	1.30	0.0106	mg/L	1.25	0.0616	99.4	90-110			
Matrix Spike (DD10690-MS2)		**Source: L1D0148-01**	Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	1.31	0.0106	mg/L	1.25	0.0786	98.4	90-110			
Batch DD10715 - Wet Chem - W - SM 2320 B-2011										
Blank (DD10715-BLK1)			Prepared & Analyzed: 04/12/2021							
Alkalinity to pH 4.5	<1.00	1.00	mg CaCO3/ L							
LCS (DD10715-BS1)			Prepared & Analyzed: 04/12/2021							
Alkalinity to pH 4.5	50.0	1.00	mg CaCO3/ L	25000		0.200	90-110			

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10715 - Wet Chem - W - SM 2320 B-2011										
Duplicate (DD10715-DUP1)	**Source: D1D0984-04**		Prepared & Analyzed: 04/12/2021							
Alkalinity to pH 4.5	40.0	1.00	mg CaCO3/ L		40.0			0.00	20	
Batch DD10734 - Wet Chem - W - SM 4500-Cl E-2011										
Blank (DD10734-BLK1)			Prepared & Analyzed: 04/13/2021							
Chloride	<2.00	2.00	mg/L							
LCS (DD10734-BS1)			Prepared & Analyzed: 04/13/2021							
Chloride	18.9	2.00	mg/L	20.0		94.6	90-110			
Duplicate (DD10734-DUP1)	**Source: D1D1180-01**		Prepared & Analyzed: 04/13/2021							
Chloride	3.85	2.00	mg/L		3.91			1.42	20	
Matrix Spike (DD10734-MS1)	**Source: D1D1180-01**		Prepared & Analyzed: 04/13/2021							
Chloride	23.3	2.00	mg/L	20.0	3.91	97.1	75-125			
Matrix Spike Dup (DD10734-MSD1)	**Source: D1D1180-01**		Prepared & Analyzed: 04/13/2021							
Chloride	23.8	2.00	mg/L	20.0	3.91	99.5	75-125	2.04	20	
Batch DD10756 - Wet-Digestion-W - EPA 351.1										
Blank (DD10756-BLK1)			Prepared & Analyzed: 04/13/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L							
LCS (DD10756-BS1)			Prepared & Analyzed: 04/13/2021							
Total Kjeldahl Nitrogen (TKN)	4.97	0.200	mg/L	5.00		99.5	90-110			
Duplicate (DD10756-DUP1)	**Source: D1D0947-02**		Prepared & Analyzed: 04/13/2021							
Total Kjeldahl Nitrogen (TKN)	1.44	0.200	mg/L		1.72			17.9	20	
Matrix Spike (DD10756-MS1)	**Source: D1D0947-02**		Prepared & Analyzed: 04/13/2021							
Total Kjeldahl Nitrogen (TKN)	11.3	0.200	mg/L	10.0	1.72	95.4	90-110			
Matrix Spike (DD10756-MS2)	**Source: D1D0952-01**		Prepared & Analyzed: 04/13/2021							
Total Kjeldahl Nitrogen (TKN)	10.3	0.200	mg/L	10.0	0.532	97.2	90-110			

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10670 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DD10670-BLK1)			Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	<0.0050	0.0050	mg/L							
Copper	<0.0020	0.0020	mg/L							
Sodium	<1.00	1.00	mg/L							
LCS (DD10670-BS1)			Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	0.524	0.0050	mg/L	0.500		105	85-115			
Copper	0.515	0.0020	mg/L	0.500		103	85-115			
Sodium	10.4	1.00	mg/L	10.5		99.3	85-115			
Duplicate (DD10670-DUP1)	**Source: D1D0975-02**		Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	0.0198	0.0050	mg/L		0.0215			8.41	20	

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10670 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Duplicate (DD10670-DUP1)	**Source: D1D0975-02**		Prepared: 04/12/2021 Analyzed: 04/13/2021							
Copper	<0.0020	0.0020	mg/L		ND				20	
Sodium	156	1.00	mg/L		154			1.10	20	
Matrix Spike (DD10670-MS1)	**Source: D1D0944-01**		Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	0.527	0.0050	mg/L	0.500	0.0088	104	70-130			
Copper	0.514	0.0020	mg/L	0.500	ND	103	70-130			
Sodium	13.4	1.00	mg/L	10.5	3.06	98.4	70-130			
Matrix Spike (DD10670-MS2)	**Source: D1D0975-01**		Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	0.524	0.0050	mg/L	0.500	0.0130	102	70-130			
Copper	0.513	0.0020	mg/L	0.500	0.0032	102	70-130			
Sodium	47.2	1.00	mg/L	10.5	37.2	95.3	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10775 - 624.1 - EPA 624.1										
Blank (DD10775-BLK1)			Prepared & Analyzed: 04/09/2021							
Acrolein	<20.0	20.0	ug/L							
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*50.7*		ug/L	*50.0*		*101*	*70-130*			
Surrogate: Toluene-d8	*52.3*		ug/L	*50.0*		*105*	*70-130*			
Surrogate: Pentafluorobenzene	*49.4*		ug/L	*50.0*		*98.7*	*70-130*			
LCS (DD10775-BS1)			Prepared & Analyzed: 04/09/2021							
Acrolein	44.6	20.0	ug/L	50.0		89.2	60-140			
2-Chloroethyl vinyl ether	57.0	20.0	ug/L	50.0		114	1-305			
Surrogate: 1,2-Dichloroethane-d4	*48.8*		ug/L	*50.0*		*97.5*	*70-130*			
Surrogate: Toluene-d8	*49.7*		ug/L	*50.0*		*99.4*	*70-130*			
Surrogate: Pentafluorobenzene	*51.2*		ug/L	*50.0*		*102*	*70-130*			
Matrix Spike (DD10775-MS1)	**Source: L1D0100-02**		Prepared & Analyzed: 04/09/2021							
Acrolein	69.3	20.0	ug/L	50.0	ND	139	40-160			
2-Chloroethyl vinyl ether	45.4	20.0	ug/L	50.0	ND	90.9	1-305			
Surrogate: 1,2-Dichloroethane-d4	*49.6*		ug/L	*50.0*		*99.2*	*70-130*			
Surrogate: Toluene-d8	*52.3*		ug/L	*50.0*		*105*	*70-130*			
Surrogate: Pentafluorobenzene	*49.2*		ug/L	*50.0*		*98.3*	*70-130*			
Matrix Spike Dup (DD10775-MSD1)	**Source: L1D0100-02**		Prepared & Analyzed: 04/09/2021							
Acrolein	72.6	20.0	ug/L	50.0	ND	145	40-160	4.68	60	
2-Chloroethyl vinyl ether	38.7	20.0	ug/L	50.0	ND	77.5	1-305	15.9	71	
Surrogate: 1,2-Dichloroethane-d4	*50.8*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Toluene-d8	*53.8*		ug/L	*50.0*		*108*	*70-130*			
Surrogate: Pentafluorobenzene	*49.2*		ug/L	*50.0*		*98.5*	*70-130*			
Batch DD10776 - 624.1 - EPA 624.1										
Blank (DD10776-BLK1)			Prepared & Analyzed: 04/12/2021							
Acetone	<10.0	10.0	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10776 - 624.1 - EPA 624.1										
Blank (DD10776-BLK1)			Prepared & Analyzed: 04/12/2021							
Acrylonitrile	<20.0	20.0	ug/L							
Benzene	<5.00	5.00	ug/L							
Bromodichloromethane	<5.00	5.00	ug/L							
Bromoform	<5.00	5.00	ug/L							
Bromomethane	<5.00	5.00	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Carbon disulfide	<5.00	5.00	ug/L							
Carbon tetrachloride	<5.00	5.00	ug/L							
Chlorobenzene	<5.00	5.00	ug/L							
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L							
Chloroform	<4.00	4.00	ug/L							
Chloromethane	<5.00	5.00	ug/L							
Dibromochloromethane	<5.00	5.00	ug/L							
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L							
1,2-Dichlorobenzene	<5.00	5.00	ug/L							
1,3-Dichlorobenzene	<5.00	5.00	ug/L							
1,4-Dichlorobenzene	<5.00	5.00	ug/L							
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L							
1,2-Dichloroethane	<5.00	5.00	ug/L							
1,1-Dichloroethane	<5.00	5.00	ug/L							
cis-1,2-Dichloroethene	<5.00	5.00	ug/L							
1,1-Dichloroethene	<5.00	5.00	ug/L							
trans-1,2-Dichloroethene	<4.00	4.00	ug/L							
1,2-Dichloropropane	<5.00	5.00	ug/L							
cis-1,3-Dichloropropene	<5.00	5.00	ug/L							
trans-1,3-Dichloropropene	<5.00	5.00	ug/L							
Ethylbenzene	<5.00	5.00	ug/L							
2-Hexanone (MBK)	<10.0	10.0	ug/L							
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L							
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L							
Styrene	<5.00	5.00	ug/L							
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L							
Tetrachloroethene	<5.00	5.00	ug/L							
Toluene	<5.00	5.00	ug/L							
1,1,2-Trichloroethane	<5.00	5.00	ug/L							
1,1,1-Trichloroethane	<5.00	5.00	ug/L							
Trichloroethene	<5.00	5.00	ug/L							
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L							
Vinyl chloride	<5.00	5.00	ug/L							
m,p-Xylene	<10.0	10.0	ug/L							
o-Xylene	<5.00	5.00	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10776 - 624.1 - EPA 624.1										
Blank (DD10776-BLK1)				Prepared & Analyzed: 04/12/2021						
Vinyl acetate	<5.00	5.00	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*49.4*		ug/L	*50.0*		*98.8*	*70-130*			
Surrogate: Toluene-d8	*52.4*		ug/L	*50.0*		*105*	*70-130*			
LCS (DD10776-BS1)				Prepared & Analyzed: 04/12/2021						
Acetone	34.3	10.0	ug/L	50.0		68.6	42.1-136			
Acrylonitrile	43.8	20.0	ug/L	50.0		87.6	60-140			
Benzene	53.5	5.00	ug/L	50.0		107	65-135			
Bromodichloromethane	53.1	5.00	ug/L	50.0		106	65-135			
Bromoform	52.8	5.00	ug/L	50.0		106	70-130			
Bromomethane	42.6	5.00	ug/L	50.0		85.3	15-185			
2-Butanone (MEK)	42.8	10.0	ug/L	50.0		85.6	63.1-143			
Carbon disulfide	42.4	5.00	ug/L	50.0		84.7	63.5-124			
Carbon tetrachloride	55.0	5.00	ug/L	50.0		110	70-130			
Chlorobenzene	53.3	5.00	ug/L	50.0		107	65-135			
Chloroethane (Ethyl chloride)	50.7	5.00	ug/L	50.0		101	40-160			
Chloroform	53.5	4.00	ug/L	50.0		107	70-135			
Chloromethane	61.9	5.00	ug/L	50.0		124	1-205			
Dibromochloromethane	58.3	5.00	ug/L	50.0		117	70-135			
Dibromomethane (Methylene bromide)	49.7	5.00	ug/L	50.0		99.5	73.8-124			
1,2-Dichlorobenzene	52.7	5.00	ug/L	50.0		105	65-135			
1,3-Dichlorobenzene	55.5	5.00	ug/L	50.0		111	70-130			
1,4-Dichlorobenzene	52.5	5.00	ug/L	50.0		105	65-135			
Dichlorodifluoromethane (Freon-12)	50.4	5.00	ug/L	50.0		101	34.7-129			
1,2-Dichloroethane	53.3	5.00	ug/L	50.0		107	70-130			
1,1-Dichloroethane	50.8	5.00	ug/L	50.0		102	70-130			
cis-1,2-Dichloroethene	48.9	5.00	ug/L	50.0		97.8	75.5-125			
1,1-Dichloroethene	57.1	5.00	ug/L	50.0		114	50-150			
trans-1,2-Dichloroethene	55.4	4.00	ug/L	50.0		111	70-130			
1,2-Dichloropropane	52.3	5.00	ug/L	50.0		105	35-165			
cis-1,3-Dichloropropene	55.4	5.00	ug/L	50.0		111	25-175			
trans-1,3-Dichloropropene	48.6	5.00	ug/L	50.0		97.2	50-150			
Ethylbenzene	53.4	5.00	ug/L	50.0		107	60-140			
2-Hexanone (MBK)	43.7	10.0	ug/L	50.0		87.4	73.6-130			
Methyl tert-butyl ether (MTBE)	39.7	5.00	ug/L	50.0		79.3	69-151			
Methylene chloride (Dichloromethane)	60.4	1.00	ug/L	50.0		121	60-140			
4-Methyl-2-pentanone (MIBK)	44.8	10.0	ug/L	50.0		89.6	72.5-129			
Styrene	54.6	5.00	ug/L	50.0		109	79.2-127			
1,1,2,2-Tetrachloroethane	52.9	5.00	ug/L	50.0		106	60-140			
Tetrachloroethene	55.4	5.00	ug/L	50.0		111	70-130			
Toluene	51.8	5.00	ug/L	50.0		104	70-130			
1,1,2-Trichloroethane	54.4	5.00	ug/L	50.0		109	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10776 - 624.1 - EPA 624.1										
LCS (DD10776-BS1)				Prepared & Analyzed: 04/12/2021						
1,1,1-Trichloroethane	55.0	5.00	ug/L	50.0		110	70-130			
Trichloroethene	54.5	5.00	ug/L	50.0		109	65-135			
Trichlorofluoromethane (Freon 11)	55.2	5.00	ug/L	50.0		110	50-150			
Vinyl chloride	54.9	5.00	ug/L	50.0		110	5-195			
m,p-Xylene	118	10.0	ug/L	100		118	77.1-129			
o-Xylene	57.5	5.00	ug/L	50.0		115	78.8-126			
Vinyl acetate	34.2	5.00	ug/L	50.0		68.3	60-140			
Surrogate: 1,2-Dichloroethane-d4	*46.4*		ug/L	*50.0*		*92.8*	*70-130*			
Surrogate: Toluene-d8	*50.2*		ug/L	*50.0*		*100*	*70-130*			
Surrogate: Pentafluorobenzene	*51.6*		ug/L	*50.0*		*103*	*70-130*			

Definitions

A5:	Sample was filtered (0.45 um) before analysis.
MCL:	US EPA Maximum Contaminant Level
mg CaCO3/L	Milligrams Calcium Carbonate per Liter
mg/L:	Milligrams per Liter
RL:	Reporting Limit
RPD:	Relative Percent Difference
ug/L:	Micrograms per Liter
Y1:	Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 4.9°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008	Massachusetts Department of Environmental Protection

CERTIFICATE OF ANALYSIS

D1D0983

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Ronald L. Warila

Director

Reported: 04/14/2021 17:00

MICROBAC

CHA
61 Louisa
Tel: (860

D1D0983
W & C - Plymouth

FOR LAB USE ONLY
Lab WO#
Project Manager

Microbac Laboratories, Inc.

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
DELIVERY: ROBERT BLANCHARD
E-MAIL:
PHONE: 508-830-4159 FAX: 508-732-0238

Billing Info

BILL TO: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
PURCHASE ORDER #
ATTENTION: ACCOUNTS PAYABLE
PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP
LOCATION: ID 11773
WELLS - QUARTERLY
ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL
ROBERT SCOTT
PHONE: CELL - 860-204-7988
FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well #AB (250 mL)	4/8/21	11:18		X	WW	1	X	X											X			
Well #AB (250 mL)	4/8/21	11:18		X	WW	1			X	X								X				
Well #AB (250 mL)(filtered)	4/8/21	11:18		X	WW	1					X							X				
Well #AB (250 mL)	4/8/21	11:18		X	WW	1						X						X				
Well #AB (250 mL)	4/8/21	11:18		X	WW	1							X					X				
Well #AB (250 mL)	4/8/21	11:18		X	WW	1								X	X	X					X	
Well #AB (40 mL vial)	4/8/21	11:18		X	WW	2											X	X				
Well #AB (40 mL vial)	4/8/21	11:18		X	WW	3											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER: Bryan Jones	4/8/21	
RECEIVED:	4/8/21	
RELINQUISHED:		
CEIVED:	4.8.2021	1455
LINQUISHED:	4.8.2021	1700
CEIVED:	4.8.21	1700

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX	☐	HARD COPY	☐	E-MAIL	☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE):

COOLED	☐	AMBIENT	☐	COMPLIANT	☐

4.9°C

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1D0984

Project Description

Wells - Quarterly

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630



Director

Ronald L. Warila

Wednesday, April 14, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1D0984

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Quarterly

Project / PO Number: 346346
Received: 04/08/2021
Reported: 04/14/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well A9	D1D0984-01	Groundwater	Grab		04/08/21 08:58	04/08/21 17:00
Well A9	D1D0984-02	Groundwater	Grab		04/08/21 08:58	04/08/21 17:00
Well A9 (filtered)	D1D0984-03	Groundwater	Grab		04/08/21 08:58	04/08/21 17:00
Well A9	D1D0984-04	Groundwater	Grab		04/08/21 08:58	04/08/21 17:00
Well A9	D1D0984-05	Groundwater	Grab		04/08/21 08:58	04/08/21 17:00
Well A9	D1D0984-06	Groundwater	Grab		04/08/21 08:58	04/08/21 17:00
Well A9	D1D0984-07	Groundwater	Grab		04/08/21 08:58	04/08/21 17:00
Well A9	D1D0984-08	Groundwater	Grab		04/08/21 08:58	04/08/21 17:00

Analytical Testing Parameters

Client Sample ID: Well A9
Sample Matrix: Groundwater
Lab Sample ID: D1D0984-01
Collected By: Customer
Collection Date: 04/08/2021 8:58

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 351.1			**Method Notes:** D1					
Total Kjeldahl Nitrogen (TKN)	<0.800	0.800	mg/L	1		04/13/21 0955	04/13/21 1734	CLW
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0287**	0.0106	mg/L	1		04/12/21 1800	04/13/21 1345	CLW

Client Sample ID: Well A9
Sample Matrix: Groundwater
Lab Sample ID: D1D0984-02
Collected By: Customer
Collection Date: 04/08/2021 8:58

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-NO_3^- F-2011								
Nitrate as N	**4.27**	0.0500	mg/L	1			04/08/21 1930	DJM
Nitrite as N	**0.0103**	0.0100	mg/L	1	**Y1**		04/08/21 1930	DJM

Client Sample ID: Well A9 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1D0984-03
Collected By: Customer
Collection Date: 04/08/2021 8:58

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0330**	0.0100	mg/L	1		04/08/21 1818	04/08/21 1938	DJM

Client Sample ID: Well A9
Sample Matrix: Groundwater
Lab Sample ID: D1D0984-04
Collected By: Customer
Collection Date: 04/08/2021 8:58

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 2320 B-2011								
Alkalinity to pH 4.5	**40.0**	1.00	mg CaCO3/L	1			04/12/21 1600	SRF

Client Sample ID: Well A9
Sample Matrix: Groundwater
Lab Sample ID: D1D0984-05
Collected By: Customer
Collection Date: 04/08/2021 8:58

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-Cl E-2011								
Chloride	**480**	20.0	mg/L	10			04/13/21 1407	CLW

CERTIFICATE OF ANALYSIS

D1D0984

Client Sample ID:	Well A9		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D0984-06	**Collection Date:**	04/08/2021 8:58

Metals Total by ICP	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.7, Rv. 4.4 (1994)								
Boron	**0.149**	0.0050	mg/L	1	**Y1**	04/12/21 1441	04/13/21 1850	JDF
Copper	<0.0020	0.0020	mg/L	1		04/12/21 1441	04/13/21 1850	JDF
Sodium	**344**	1.00	mg/L	1		04/12/21 1441	04/13/21 1850	JDF

Client Sample ID:	Well A9		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D0984-07	**Collection Date:**	04/08/2021 8:58

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acrolein	<20.0	20.0	ug/L	1			04/09/21 2357	JAN
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	1			04/09/21 2357	JAN
Surrogate: 1,2-Dichloroethane-d4	95.6	Limit: 70-130	% Rec	1			04/09/21 2357	JAN
Surrogate: Toluene-d8	105	Limit: 70-130	% Rec	1			04/09/21 2357	JAN
Surrogate: Pentafluorobenzene	97.6	Limit: 70-130	% Rec	1			04/09/21 2357	JAN

CERTIFICATE OF ANALYSIS

D1D0984

Client Sample ID:	Well A9		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D0984-08	**Collection Date:**	04/08/2021 8:58

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acetone	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1727	JAN
Acrylonitrile	<20.0	20.0	ug/L	1			04/12/21 1727	JAN
Benzene	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
Bromodichloromethane	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
Bromoform	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
Bromomethane	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
2-Butanone (MEK)	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1727	JAN
Carbon disulfide	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1727	JAN
Carbon tetrachloride	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
Chlorobenzene	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
Chloroform	**7.45**	4.00	ug/L	1			04/12/21 1727	JAN
Chloromethane	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
Dibromochloromethane	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1727	JAN
1,2-Dichlorobenzene	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
1,3-Dichlorobenzene	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
1,4-Dichlorobenzene	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1727	JAN
1,2-Dichloroethane	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
1,1-Dichloroethane	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
cis-1,2-Dichloroethene	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1727	JAN
1,1-Dichloroethene	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
trans-1,2-Dichloroethene	<4.00	4.00	ug/L	1			04/12/21 1727	JAN
1,2-Dichloropropane	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
cis-1,3-Dichloropropene	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
trans-1,3-Dichloropropene	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
Ethylbenzene	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
2-Hexanone (MBK)	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1727	JAN
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1727	JAN
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L	1			04/12/21 1727	JAN
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1727	JAN
Styrene	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1727	JAN
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
Tetrachloroethene	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
Toluene	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
1,1,2-Trichloroethane	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
1,1,1-Trichloroethane	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
Trichloroethene	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
Vinyl chloride	<5.00	5.00	ug/L	1			04/12/21 1727	JAN
m,p-Xylene	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1727	JAN

CERTIFICATE OF ANALYSIS

D1D0984

Client Sample ID:	Well A9		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D0984-08	**Collection Date:**	04/08/2021 8:58

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
o-Xylene	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1727	JAN
Vinyl acetate	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1727	JAN
Surrogate: 1,2-Dichloroethane-d4	94.6	Limit: 70-130	% Rec	1			04/12/21 1727	JAN
Surrogate: Toluene-d8	102	Limit: 70-130	% Rec	1			04/12/21 1727	JAN
Surrogate: Pentafluorobenzene	102	Limit: 70-130	% Rec	1			04/12/21 1727	JAN

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-$NO3^-$ F-2011	DD10534	DD10534-BS1	
		DD10534-BS2	
		DD10534-BLK1	
		DD10534-BLK1	
		DD10534-DUP1	D1D0913-02
		DD10534-DUP1	D1D0913-02
		DD10534-MS1	D1D0913-02
		DD10534-MS1	D1D0913-02
		DD10534-MSD1	D1D0913-02
		DD10534-MSD1	D1D0913-02
		D1D0984-02	Well A9
		D1D0984-02	Well A9

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DD10566	DD10566-BLK1	
		DD10566-BS1	
		DD10566-DUP1	D1D0986-03
		DD10566-MS1	D1D0986-03
		DD10566-MS2	D1D0987-03
		D1D0984-03	Well A9 (filtered)

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.7, Rv. 4.4 (1994)	DD10670	DD10670-BLK1	
		DD10670-BS1	
		DD10670-DUP1	D1D0975-02
		DD10670-MS1	D1D0944-01
		D1D0984-06	Well A9
		D1D0984-06	Well A9
		DD10670-MS2	D1D0975-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DD10690	DD10690-BS1	
		DD10690-BLK1	
		DD10690-DUP1	D1D0991-05
		DD10690-MS1	D1D0991-05
		DD10690-MS2	L1D0148-01
		D1D0984-01	Well A9

Method	Batch	Laboratory ID	Client / Source ID
SM 2320 B-2011	DD10715	DD10715-BS1	
		DD10715-DUP1	D1D0984-04

SM 2320 B-2011	DD10715	DD10715-BLK1	
		D1D0984-04	Well A9

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-Cl E-2011	DD10734	DD10734-BS1	
		DD10734-BLK1	
		DD10734-DUP1	D1D1180-01
		DD10734-MS1	D1D1180-01
		DD10734-MSD1	D1D1180-01
		D1D0984-05	Well A9

Method	Batch	Laboratory ID	Client / Source ID
EPA 351.1	DD10756	DD10756-BS1	
		DD10756-DUP1	D1D0947-02
		DD10756-MS1	D1D0947-02
		DD10756-MS2	D1D0952-01
		D1D0984-01	Well A9
		DD10756-BLK1	

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DD10775	DD10775-BS1	
		DD10775-BLK1	
		DD10775-MS1	L1D0100-02
		DD10775-MSD1	L1D0100-02
		D1D0984-07	Well A9

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DD10776	DD10776-BS1	
		DD10776-BLK1	
		D1D0984-08	Well A9

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10534 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Blank (DD10534-BLK1)			Prepared & Analyzed: 04/08/2021							
Nitrite as N	<0.0100	0.0100	mg/L							
Nitrate as N	<0.0500	0.0500	mg/L							
LCS (DD10534-BS1)			Prepared & Analyzed: 04/08/2021							
Nitrate as N	5.04	0.0500	mg/L	5.00		101	90-110			
LCS (DD10534-BS2)			Prepared & Analyzed: 04/08/2021							
Nitrite as N	0.999	0.0100	mg/L	1.00		99.9	90-110			
Duplicate (DD10534-DUP1)	**Source: D1D0913-02**		Prepared & Analyzed: 04/08/2021							
Nitrite as N	<0.0100	0.0100	mg/L		0.00360			0.00	20	A5

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10534 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Duplicate (DD10534-DUP1)		**Source: D1D0913-02**	Prepared & Analyzed: 04/08/2021							
Nitrate as N	<0.0500	0.0500	mg/L		ND				20	A5
Matrix Spike (DD10534-MS1)		**Source: D1D0913-02**	Prepared & Analyzed: 04/08/2021							
Nitrite as N	0.979	0.0100	mg/L	1.00	0.00360	97.6	75-125			A5
Nitrate as N	4.92	0.0500	mg/L	5.00	ND	98.3	75-125			A5
Matrix Spike Dup (DD10534-MSD1)		**Source: D1D0913-02**	Prepared & Analyzed: 04/08/2021							
Nitrite as N	0.976	0.0100	mg/L	1.00	0.00360	97.3	75-125	0.317	20	A5
Nitrate as N	4.87	0.0500	mg/L	5.00	ND	97.5	75-125	0.854	20	A5
Batch DD10566 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DD10566-BLK1)			Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DD10566-BS1)			Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	0.985	0.0100	mg/L	1.00		98.4	90-110			
Duplicate (DD10566-DUP1)		**Source: D1D0986-03**	Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L		ND				20	
Matrix Spike (DD10566-MS1)		**Source: D1D0986-03**	Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	1.01	0.0100	mg/L	1.00	ND	101	90-110			
Matrix Spike (DD10566-MS2)		**Source: D1D0987-03**	Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	0.994	0.0100	mg/L	1.00	0.0130	98.0	90-110			
Batch DD10690 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DD10690-BLK1)			Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DD10690-BS1)			Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	1.01	0.0106	mg/L	1.00		101	90-110			
Duplicate (DD10690-DUP1)		**Source: D1D0991-05**	Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	0.0669	0.0106	mg/L		0.0616			8.26	20	
Matrix Spike (DD10690-MS1)		**Source: D1D0991-05**	Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	1.30	0.0106	mg/L	1.25	0.0616	99.4	90-110			
Matrix Spike (DD10690-MS2)		**Source: L1D0148-01**	Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	1.31	0.0106	mg/L	1.25	0.0786	98.4	90-110			
Batch DD10715 - Wet Chem - W - SM 2320 B-2011										
Blank (DD10715-BLK1)			Prepared & Analyzed: 04/12/2021							
Alkalinity to pH 4.5	<1.00	1.00	mg CaCO3/ L							
LCS (DD10715-BS1)			Prepared & Analyzed: 04/12/2021							
Alkalinity to pH 4.5	50.0	1.00	mg CaCO3/ L	25000		0.200	90-110			

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10715 - Wet Chem - W - SM 2320 B-2011										
Duplicate (DD10715-DUP1)	**Source: D1D0984-04**		Prepared & Analyzed: 04/12/2021							
Alkalinity to pH 4.5	40.0	1.00	mg CaCO3/ L		40.0			0.00	20	
Batch DD10734 - Wet Chem - W - SM 4500-Cl E-2011										
Blank (DD10734-BLK1)			Prepared & Analyzed: 04/13/2021							
Chloride	<2.00	2.00	mg/L							
LCS (DD10734-BS1)			Prepared & Analyzed: 04/13/2021							
Chloride	18.9	2.00	mg/L	20.0		94.6	90-110			
Duplicate (DD10734-DUP1)	**Source: D1D1180-01**		Prepared & Analyzed: 04/13/2021							
Chloride	3.85	2.00	mg/L		3.91			1.42	20	
Matrix Spike (DD10734-MS1)	**Source: D1D1180-01**		Prepared & Analyzed: 04/13/2021							
Chloride	23.3	2.00	mg/L	20.0	3.91	97.1	75-125			
Matrix Spike Dup (DD10734-MSD1)	**Source: D1D1180-01**		Prepared & Analyzed: 04/13/2021							
Chloride	23.8	2.00	mg/L	20.0	3.91	99.5	75-125	2.04	20	
Batch DD10756 - Wet-Digestion-W - EPA 351.1										
Blank (DD10756-BLK1)			Prepared & Analyzed: 04/13/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L							
LCS (DD10756-BS1)			Prepared & Analyzed: 04/13/2021							
Total Kjeldahl Nitrogen (TKN)	4.97	0.200	mg/L	5.00		99.5	90-110			
Duplicate (DD10756-DUP1)	**Source: D1D0947-02**		Prepared & Analyzed: 04/13/2021							
Total Kjeldahl Nitrogen (TKN)	1.44	0.200	mg/L		1.72			17.9	20	
Matrix Spike (DD10756-MS1)	**Source: D1D0947-02**		Prepared & Analyzed: 04/13/2021							
Total Kjeldahl Nitrogen (TKN)	11.3	0.200	mg/L	10.0	1.72	95.4	90-110			
Matrix Spike (DD10756-MS2)	**Source: D1D0952-01**		Prepared & Analyzed: 04/13/2021							
Total Kjeldahl Nitrogen (TKN)	10.3	0.200	mg/L	10.0	0.532	97.2	90-110			

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10670 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DD10670-BLK1)			Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	<0.0050	0.0050	mg/L							
Copper	<0.0020	0.0020	mg/L							
Sodium	<1.00	1.00	mg/L							
LCS (DD10670-BS1)			Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	0.524	0.0050	mg/L	0.500		105	85-115			
Copper	0.515	0.0020	mg/L	0.500		103	85-115			
Sodium	10.4	1.00	mg/L	10.5		99.3	85-115			
Duplicate (DD10670-DUP1)	**Source: D1D0975-02**		Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	0.0198	0.0050	mg/L		0.0215			8.41	20	

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10670 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Duplicate (DD10670-DUP1)	**Source: D1D0975-02**		Prepared: 04/12/2021 Analyzed: 04/13/2021							
Copper	<0.0020	0.0020	mg/L		ND				20	
Sodium	156	1.00	mg/L		154			1.10	20	
Matrix Spike (DD10670-MS1)	**Source: D1D0944-01**		Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	0.527	0.0050	mg/L	0.500	0.0088	104	70-130			
Copper	0.514	0.0020	mg/L	0.500	ND	103	70-130			
Sodium	13.4	1.00	mg/L	10.5	3.06	98.4	70-130			
Matrix Spike (DD10670-MS2)	**Source: D1D0975-01**		Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	0.524	0.0050	mg/L	0.500	0.0130	102	70-130			
Copper	0.513	0.0020	mg/L	0.500	0.0032	102	70-130			
Sodium	47.2	1.00	mg/L	10.5	37.2	95.3	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10775 - 624.1 - EPA 624.1										
Blank (DD10775-BLK1)			Prepared & Analyzed: 04/09/2021							
Acrolein	<20.0	20.0	ug/L							
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*50.7*		ug/L	*50.0*		*101*	*70-130*			
Surrogate: Toluene-d8	*52.3*		ug/L	*50.0*		*105*	*70-130*			
Surrogate: Pentafluorobenzene	*49.4*		ug/L	*50.0*		*98.7*	*70-130*			
LCS (DD10775-BS1)			Prepared & Analyzed: 04/09/2021							
Acrolein	44.6	20.0	ug/L	50.0		89.2	60-140			
2-Chloroethyl vinyl ether	57.0	20.0	ug/L	50.0		114	1-305			
Surrogate: 1,2-Dichloroethane-d4	*48.8*		ug/L	*50.0*		*97.5*	*70-130*			
Surrogate: Toluene-d8	*49.7*		ug/L	*50.0*		*99.4*	*70-130*			
Surrogate: Pentafluorobenzene	*51.2*		ug/L	*50.0*		*102*	*70-130*			
Matrix Spike (DD10775-MS1)	**Source: L1D0100-02**		Prepared & Analyzed: 04/09/2021							
Acrolein	69.3	20.0	ug/L	50.0	ND	139	40-160			
2-Chloroethyl vinyl ether	45.4	20.0	ug/L	50.0	ND	90.9	1-305			
Surrogate: 1,2-Dichloroethane-d4	*49.6*		ug/L	*50.0*		*99.2*	*70-130*			
Surrogate: Toluene-d8	*52.3*		ug/L	*50.0*		*105*	*70-130*			
Surrogate: Pentafluorobenzene	*49.2*		ug/L	*50.0*		*98.3*	*70-130*			
Matrix Spike Dup (DD10775-MSD1)	**Source: L1D0100-02**		Prepared & Analyzed: 04/09/2021							
Acrolein	72.6	20.0	ug/L	50.0	ND	145	40-160	4.68	60	
2-Chloroethyl vinyl ether	38.7	20.0	ug/L	50.0	ND	77.5	1-305	15.9	71	
Surrogate: 1,2-Dichloroethane-d4	*50.8*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Toluene-d8	*53.8*		ug/L	*50.0*		*108*	*70-130*			
Surrogate: Pentafluorobenzene	*49.2*		ug/L	*50.0*		*98.5*	*70-130*			
Batch DD10776 - 624.1 - EPA 624.1										
Blank (DD10776-BLK1)			Prepared & Analyzed: 04/12/2021							
Acetone	<10.0	10.0	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10776 - 624.1 - EPA 624.1										
Blank (DD10776-BLK1)			Prepared & Analyzed: 04/12/2021							
Acrylonitrile	<20.0	20.0	ug/L							
Benzene	<5.00	5.00	ug/L							
Bromodichloromethane	<5.00	5.00	ug/L							
Bromoform	<5.00	5.00	ug/L							
Bromomethane	<5.00	5.00	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Carbon disulfide	<5.00	5.00	ug/L							
Carbon tetrachloride	<5.00	5.00	ug/L							
Chlorobenzene	<5.00	5.00	ug/L							
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L							
Chloroform	<4.00	4.00	ug/L							
Chloromethane	<5.00	5.00	ug/L							
Dibromochloromethane	<5.00	5.00	ug/L							
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L							
1,2-Dichlorobenzene	<5.00	5.00	ug/L							
1,3-Dichlorobenzene	<5.00	5.00	ug/L							
1,4-Dichlorobenzene	<5.00	5.00	ug/L							
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L							
1,2-Dichloroethane	<5.00	5.00	ug/L							
1,1-Dichloroethane	<5.00	5.00	ug/L							
cis-1,2-Dichloroethene	<5.00	5.00	ug/L							
1,1-Dichloroethene	<5.00	5.00	ug/L							
trans-1,2-Dichloroethene	<4.00	4.00	ug/L							
1,2-Dichloropropane	<5.00	5.00	ug/L							
cis-1,3-Dichloropropene	<5.00	5.00	ug/L							
trans-1,3-Dichloropropene	<5.00	5.00	ug/L							
Ethylbenzene	<5.00	5.00	ug/L							
2-Hexanone (MBK)	<10.0	10.0	ug/L							
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L							
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L							
Styrene	<5.00	5.00	ug/L							
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L							
Tetrachloroethene	<5.00	5.00	ug/L							
Toluene	<5.00	5.00	ug/L							
1,1,2-Trichloroethane	<5.00	5.00	ug/L							
1,1,1-Trichloroethane	<5.00	5.00	ug/L							
Trichloroethene	<5.00	5.00	ug/L							
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L							
Vinyl chloride	<5.00	5.00	ug/L							
m,p-Xylene	<10.0	10.0	ug/L							
o-Xylene	<5.00	5.00	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10776 - 624.1 - EPA 624.1										
Blank (DD10776-BLK1)				Prepared & Analyzed: 04/12/2021						
Vinyl acetate	<5.00	5.00	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*49.4*		ug/L	*50.0*		*98.8*	*70-130*			
Surrogate: Toluene-d8	*52.4*		ug/L	*50.0*		*105*	*70-130*			
LCS (DD10776-BS1)				Prepared & Analyzed: 04/12/2021						
Acetone	34.3	10.0	ug/L	50.0		68.6	42.1-136			
Acrylonitrile	43.8	20.0	ug/L	50.0		87.6	60-140			
Benzene	53.5	5.00	ug/L	50.0		107	65-135			
Bromodichloromethane	53.1	5.00	ug/L	50.0		106	65-135			
Bromoform	52.8	5.00	ug/L	50.0		106	70-130			
Bromomethane	42.6	5.00	ug/L	50.0		85.3	15-185			
2-Butanone (MEK)	42.8	10.0	ug/L	50.0		85.6	63.1-143			
Carbon disulfide	42.4	5.00	ug/L	50.0		84.7	63.5-124			
Carbon tetrachloride	55.0	5.00	ug/L	50.0		110	70-130			
Chlorobenzene	53.3	5.00	ug/L	50.0		107	65-135			
Chloroethane (Ethyl chloride)	50.7	5.00	ug/L	50.0		101	40-160			
Chloroform	53.5	4.00	ug/L	50.0		107	70-135			
Chloromethane	61.9	5.00	ug/L	50.0		124	1-205			
Dibromochloromethane	58.3	5.00	ug/L	50.0		117	70-135			
Dibromomethane (Methylene bromide)	49.7	5.00	ug/L	50.0		99.5	73.8-124			
1,2-Dichlorobenzene	52.7	5.00	ug/L	50.0		105	65-135			
1,3-Dichlorobenzene	55.5	5.00	ug/L	50.0		111	70-130			
1,4-Dichlorobenzene	52.5	5.00	ug/L	50.0		105	65-135			
Dichlorodifluoromethane (Freon-12)	50.4	5.00	ug/L	50.0		101	34.7-129			
1,2-Dichloroethane	53.3	5.00	ug/L	50.0		107	70-130			
1,1-Dichloroethane	50.8	5.00	ug/L	50.0		102	70-130			
cis-1,2-Dichloroethene	48.9	5.00	ug/L	50.0		97.8	75.5-125			
1,1-Dichloroethene	57.1	5.00	ug/L	50.0		114	50-150			
trans-1,2-Dichloroethene	55.4	4.00	ug/L	50.0		111	70-130			
1,2-Dichloropropane	52.3	5.00	ug/L	50.0		105	35-165			
cis-1,3-Dichloropropene	55.4	5.00	ug/L	50.0		111	25-175			
trans-1,3-Dichloropropene	48.6	5.00	ug/L	50.0		97.2	50-150			
Ethylbenzene	53.4	5.00	ug/L	50.0		107	60-140			
2-Hexanone (MBK)	43.7	10.0	ug/L	50.0		87.4	73.6-130			
Methyl tert-butyl ether (MTBE)	39.7	5.00	ug/L	50.0		79.3	69-151			
Methylene chloride (Dichloromethane)	60.4	1.00	ug/L	50.0		121	60-140			
4-Methyl-2-pentanone (MIBK)	44.8	10.0	ug/L	50.0		89.6	72.5-129			
Styrene	54.6	5.00	ug/L	50.0		109	79.2-127			
1,1,2,2-Tetrachloroethane	52.9	5.00	ug/L	50.0		106	60-140			
Tetrachloroethene	55.4	5.00	ug/L	50.0		111	70-130			
Toluene	51.8	5.00	ug/L	50.0		104	70-130			
1,1,2-Trichloroethane	54.4	5.00	ug/L	50.0		109	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10776 - 624.1 - EPA 624.1										
LCS (DD10776-BS1)			Prepared & Analyzed: 04/12/2021							
1,1,1-Trichloroethane	55.0	5.00	ug/L	50.0		110	70-130			
Trichloroethene	54.5	5.00	ug/L	50.0		109	65-135			
Trichlorofluoromethane (Freon 11)	55.2	5.00	ug/L	50.0		110	50-150			
Vinyl chloride	54.9	5.00	ug/L	50.0		110	5-195			
m,p-Xylene	118	10.0	ug/L	100		118	77.1-129			
o-Xylene	57.5	5.00	ug/L	50.0		115	78.8-126			
Vinyl acetate	34.2	5.00	ug/L	50.0		68.3	60-140			
Surrogate: 1,2-Dichloroethane-d4	*46.4*		ug/L	*50.0*		*92.8*	*70-130*			
Surrogate: Toluene-d8	*50.2*		ug/L	*50.0*		*100*	*70-130*			
Surrogate: Pentafluorobenzene	*51.6*		ug/L	*50.0*		*103*	*70-130*			

Definitions

A5:	Sample was filtered (0.45 um) before analysis.
D1:	The sample was diluted during sample preparation (extraction, distillation or digestion) due to matrix interference.
MCL:	US EPA Maximum Contaminant Level
mg CaCO3/L	Milligrams Calcium Carbonate per Liter
mg/L:	Milligrams per Liter
RL:	Reporting Limit
RPD:	Relative Percent Difference
ug/L:	Micrograms per Liter
Y1:	Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 4.9°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008 Massachusetts Department of Environmental Protection

CERTIFICATE OF ANALYSIS

D1D0984

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Ronald L. Warila

Director

Reported: 04/14/2021 17:01

MICROBAC

D1D0984

W & C - Plymouth

FOR LAB USE ONLY

Lab WO#

Project Manager

Microbac Laboratories, Inc.

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

DELIVERY: ROBERT BLANCHARD

E-MAIL:

PHONE: 508-830-4159 FAX: 508-732-0238

BILL TO: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

PURCHASE ORDER #

ATTENTION: ACCOUNTS PAYABLE

PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP

LOCATION: ID 11773

WELLS - QUARTERLY

ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL

ROBERT SCOTT

PHONE: CELL - 860-204-7988

FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # A9 (250 mL)	4/8/21	08:58		X	WW	1	X	X											X			
Well # A9 (250 mL)	4/8/21	08:58		X	WW	1			X	X								X				
Well # A9 (250 mL)(filtered)	4/8/21	08:58		X	WW	1					X							X				
Well # A9 (250 mL)	4/8/21	08:58		X	WW	1						X						X				
Well # A9 (250 mL)	4/8/21	08:58		X	WW	1							X					X				
Well # A9 (250 mL)	4/8/21	08:58		X	WW	1								X	X	X					X	
Well # A9 (40 mL vial)	4/8/21	08:58		X	WW	2											X	X				
Well # A9 (40 mL vial)	4/8/21	08:58		X	WW	2											X			X		

PRESERVATIVE VERIFIED Initials

CUSTODY TRANSFER	DATE	TIME
SAMPLER: Dayton/Jam	4/8/21	
RECEIVED:		
RELINQUISHED:		
CEIVED:	4.8.2021	1455
LINQUISHED:	4.8.2021	1700
CEIVED:	4-8-21	1700

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☐ AMBIENT ☐ 4.9°C

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1D0986

Project Description

Wells - Quarterly

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Tuesday, April 20, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request . This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1D0986

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Quarterly

Project / PO Number: 346346
Received: 04/08/2021
Reported: 04/20/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well A10	D1D0986-01	Groundwater	Grab		04/08/21 10:16	04/08/21 17:00
Well A10	D1D0986-02	Groundwater	Grab		04/08/21 10:16	04/08/21 17:00
Well A10 (filtered)	D1D0986-03	Groundwater	Grab		04/08/21 10:16	04/08/21 17:00
Well A10	D1D0986-04	Groundwater	Grab		04/08/21 10:16	04/08/21 17:00
Well A10	D1D0986-05	Groundwater	Grab		04/08/21 10:16	04/08/21 17:00
Well A10	D1D0986-06	Groundwater	Grab		04/08/21 10:16	04/08/21 17:00
Well A10	D1D0986-07	Groundwater	Grab		04/08/21 10:16	04/08/21 17:00
Well A10	D1D0986-08	Groundwater	Grab		04/08/21 10:16	04/08/21 17:00

CERTIFICATE OF ANALYSIS

D1D0986

Analytical Testing Parameters

Client Sample ID: Well A10
Sample Matrix: Groundwater
Lab Sample ID: D1D0986-01
Collected By: Customer
Collection Date: 04/08/2021 10:16

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 351.1			**Method Notes:** D1					
Total Kjeldahl Nitrogen (TKN)	<0.400	0.400	mg/L	1		04/14/21 1011	04/19/21 1353	CLW
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0149**	0.0106	mg/L	1		04/12/21 1800	04/13/21 1347	CLW

Client Sample ID: Well A10
Sample Matrix: Groundwater
Lab Sample ID: D1D0986-02
Collected By: Customer
Collection Date: 04/08/2021 10:16

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-NO_3^- F-2011								
Nitrate as N	**3.05**	0.0500	mg/L	1			04/08/21 1931	DJM
Nitrite as N	<0.0100	0.0100	mg/L	1	**Y1**		04/08/21 1931	DJM

Client Sample ID: Well A10 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1D0986-03
Collected By: Customer
Collection Date: 04/08/2021 10:16

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	<0.0100	0.0100	mg/L	1		04/08/21 1818	04/08/21 1927	DJM

Client Sample ID: Well A10
Sample Matrix: Groundwater
Lab Sample ID: D1D0986-04
Collected By: Customer
Collection Date: 04/08/2021 10:16

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 2320 B-2011								
Alkalinity to pH 4.5	**37.5**	1.00	mg CaCO3/L	1			04/12/21 1600	SRF

Client Sample ID: Well A10
Sample Matrix: Groundwater
Lab Sample ID: D1D0986-05
Collected By: Customer
Collection Date: 04/08/2021 10:16

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-Cl E-2011								
Chloride	**456**	20.0	mg/L	10			04/13/21 1409	CLW

CERTIFICATE OF ANALYSIS

D1D0986

Client Sample ID:	Well A10		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D0986-06	**Collection Date:**	04/08/2021 10:16

Metals Total by ICP	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.7, Rv. 4.4 (1994)								
Boron	**0.149**	0.0050	mg/L	1	**Y1**	04/12/21 1441	04/13/21 1909	JDF
Copper	<0.0020	0.0020	mg/L	1		04/12/21 1441	04/13/21 1909	JDF
Sodium	**310**	1.00	mg/L	1		04/12/21 1441	04/13/21 1909	JDF

Client Sample ID:	Well A10		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D0986-07	**Collection Date:**	04/08/2021 10:16

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acrolein	<20.0	20.0	ug/L	1			04/10/21 0022	JAN
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	1			04/10/21 0022	JAN
Surrogate: 1,2-Dichloroethane-d4	97.9	Limit: 70-130	% Rec	1			04/10/21 0022	JAN
Surrogate: Toluene-d8	106	Limit: 70-130	% Rec	1			04/10/21 0022	JAN
Surrogate: Pentafluorobenzene	98.7	Limit: 70-130	% Rec	1			04/10/21 0022	JAN

CERTIFICATE OF ANALYSIS

D1D0986

Client Sample ID:	Well A10		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D0986-08	**Collection Date:**	04/08/2021 10:16

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acetone	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1752	JAN
Acrylonitrile	<20.0	20.0	ug/L	1			04/12/21 1752	JAN
Benzene	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
Bromodichloromethane	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
Bromoform	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
Bromomethane	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
2-Butanone (MEK)	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1752	JAN
Carbon disulfide	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1752	JAN
Carbon tetrachloride	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
Chlorobenzene	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
Chloroform	<4.00	4.00	ug/L	1			04/12/21 1752	JAN
Chloromethane	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
Dibromochloromethane	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1752	JAN
1,2-Dichlorobenzene	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
1,3-Dichlorobenzene	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
1,4-Dichlorobenzene	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1752	JAN
1,2-Dichloroethane	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
1,1-Dichloroethane	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
cis-1,2-Dichloroethene	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1752	JAN
1,1-Dichloroethene	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
trans-1,2-Dichloroethene	<4.00	4.00	ug/L	1			04/12/21 1752	JAN
1,2-Dichloropropane	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
cis-1,3-Dichloropropene	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
trans-1,3-Dichloropropene	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
Ethylbenzene	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
2-Hexanone (MBK)	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1752	JAN
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1752	JAN
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L	1			04/12/21 1752	JAN
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1752	JAN
Styrene	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1752	JAN
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
Tetrachloroethene	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
Toluene	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
1,1,2-Trichloroethane	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
1,1,1-Trichloroethane	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
Trichloroethene	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
Vinyl chloride	<5.00	5.00	ug/L	1			04/12/21 1752	JAN
m,p-Xylene	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1752	JAN

CERTIFICATE OF ANALYSIS

D1D0986

Client Sample ID:	Well A10		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D0986-08	**Collection Date:**	04/08/2021 10:16

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
o-Xylene	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1752	JAN
Vinyl acetate	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1752	JAN
Surrogate: 1,2-Dichloroethane-d4	95.5	Limit: 70-130	% Rec	1			04/12/21 1752	JAN
Surrogate: Toluene-d8	103	Limit: 70-130	% Rec	1			04/12/21 1752	JAN
Surrogate: Pentafluorobenzene	100	Limit: 70-130	% Rec	1			04/12/21 1752	JAN

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-NO_3^- F-2011	DD10534	DD10534-BS1	
		DD10534-BS2	
		DD10534-BLK1	
		DD10534-BLK1	
		DD10534-DUP1	D1D0913-02
		DD10534-DUP1	D1D0913-02
		DD10534-MS1	D1D0913-02
		DD10534-MS1	D1D0913-02
		DD10534-MSD1	D1D0913-02
		DD10534-MSD1	D1D0913-02
		D1D0986-02	Well A10
		D1D0986-02	Well A10

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DD10566	DD10566-BLK1	
		DD10566-BS1	
		D1D0986-03	Well A10 (filtered)
		DD10566-DUP1	D1D0986-03
		DD10566-MS1	D1D0986-03
		DD10566-MS2	D1D0987-03

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.7, Rv. 4.4 (1994)	DD10670	DD10670-BLK1	
		DD10670-BS1	
		DD10670-DUP1	D1D0975-02
		DD10670-MS1	D1D0944-01
		DD10670-MS2	D1D0975-01
		D1D0986-06	Well A10
		D1D0986-06	Well A10

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DD10690	DD10690-BS1	
		DD10690-BLK1	
		DD10690-DUP1	D1D0991-05
		DD10690-MS1	D1D0991-05
		DD10690-MS2	L1D0148-01
		D1D0986-01	Well A10

Method	Batch	Laboratory ID	Client / Source ID
SM 2320 B-2011	DD10715	DD10715-BS1	
		DD10715-DUP1	D1D0984-04

Method	Batch	Laboratory ID	Client / Source ID
SM 2320 B-2011	DD10715	DD10715-BLK1	
		D1D0986-04	Well A10

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-Cl E-2011	DD10734	DD10734-BS1	
		DD10734-BLK1	
		DD10734-DUP1	D1D1180-01
		DD10734-MS1	D1D1180-01
		DD10734-MSD1	D1D1180-01
		D1D0986-05	Well A10

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DD10775	DD10775-BS1	
		DD10775-BLK1	
		DD10775-MS1	L1D0100-02
		DD10775-MSD1	L1D0100-02
		D1D0986-07	Well A10

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DD10776	DD10776-BS1	
		DD10776-BLK1	
		D1D0986-08	Well A10

Method	Batch	Laboratory ID	Client / Source ID
EPA 351.1	DD10878	DD10878-BS1	
		DD10878-BLK1	
		DD10878-DUP1	D1D1026-02
		DD10878-MS2	D1D1122-03
		D1D0986-01	Well A10
		DD10878-MS1	D1D1026-02

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10534 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Blank (DD10534-BLK1)			Prepared & Analyzed: 04/08/2021							
Nitrite as N	<0.0100	0.0100	mg/L							
Nitrate as N	<0.0500	0.0500	mg/L							
LCS (DD10534-BS1)			Prepared & Analyzed: 04/08/2021							
Nitrate as N	5.04	0.0500	mg/L	5.00		101	90-110			
LCS (DD10534-BS2)			Prepared & Analyzed: 04/08/2021							
Nitrite as N	0.999	0.0100	mg/L	1.00		99.9	90-110			
Duplicate (DD10534-DUP1)	**Source: D1D0913-02**		Prepared & Analyzed: 04/08/2021							
Nitrite as N	<0.0100	0.0100	mg/L		0.00360			0.00	20	A5

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10534 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Duplicate (DD10534-DUP1)		**Source: D1D0913-02**	Prepared & Analyzed: 04/08/2021							
Nitrate as N	<0.0500	0.0500	mg/L		ND				20	A5
Matrix Spike (DD10534-MS1)		**Source: D1D0913-02**	Prepared & Analyzed: 04/08/2021							
Nitrite as N	0.979	0.0100	mg/L	1.00	0.00360	97.6	75-125			A5
Nitrate as N	4.92	0.0500	mg/L	5.00	ND	98.3	75-125			A5
Matrix Spike Dup (DD10534-MSD1)		**Source: D1D0913-02**	Prepared & Analyzed: 04/08/2021							
Nitrite as N	0.976	0.0100	mg/L	1.00	0.00360	97.3	75-125	0.317	20	A5
Nitrate as N	4.87	0.0500	mg/L	5.00	ND	97.5	75-125	0.854	20	A5
Batch DD10566 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DD10566-BLK1)			Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DD10566-BS1)			Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	0.985	0.0100	mg/L	1.00		98.4	90-110			
Duplicate (DD10566-DUP1)		**Source: D1D0986-03**	Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L		ND				20	
Matrix Spike (DD10566-MS1)		**Source: D1D0986-03**	Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	1.01	0.0100	mg/L	1.00	ND	101	90-110			
Matrix Spike (DD10566-MS2)		**Source: D1D0987-03**	Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	0.994	0.0100	mg/L	1.00	0.0130	98.0	90-110			
Batch DD10690 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DD10690-BLK1)			Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DD10690-BS1)			Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	1.01	0.0106	mg/L	1.00		101	90-110			
Duplicate (DD10690-DUP1)		**Source: D1D0991-05**	Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	0.0669	0.0106	mg/L		0.0616			8.26	20	
Matrix Spike (DD10690-MS1)		**Source: D1D0991-05**	Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	1.30	0.0106	mg/L	1.25	0.0616	99.4	90-110			
Matrix Spike (DD10690-MS2)		**Source: L1D0148-01**	Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	1.31	0.0106	mg/L	1.25	0.0786	98.4	90-110			
Batch DD10715 - Wet Chem - W - SM 2320 B-2011										
Blank (DD10715-BLK1)			Prepared & Analyzed: 04/12/2021							
Alkalinity to pH 4.5	<1.00	1.00	mg CaCO3/ L							
LCS (DD10715-BS1)			Prepared & Analyzed: 04/12/2021							
Alkalinity to pH 4.5	50.0	1.00	mg CaCO3/ L	25000		0.200	90-110			

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10715 - Wet Chem - W - SM 2320 B-2011										
Duplicate (DD10715-DUP1)		**Source: D1D0984-04**	Prepared & Analyzed: 04/12/2021							
Alkalinity to pH 4.5	40.0	1.00	mg CaCO3/ L		40.0			0.00	20	
Batch DD10734 - Wet Chem - W - SM 4500-Cl E-2011										
Blank (DD10734-BLK1)			Prepared & Analyzed: 04/13/2021							
Chloride	<2.00	2.00	mg/L							
LCS (DD10734-BS1)			Prepared & Analyzed: 04/13/2021							
Chloride	18.9	2.00	mg/L	20.0		94.6	90-110			
Duplicate (DD10734-DUP1)		**Source: D1D1180-01**	Prepared & Analyzed: 04/13/2021							
Chloride	3.85	2.00	mg/L		3.91			1.42	20	
Matrix Spike (DD10734-MS1)		**Source: D1D1180-01**	Prepared & Analyzed: 04/13/2021							
Chloride	23.3	2.00	mg/L	20.0	3.91	97.1	75-125			
Matrix Spike Dup (DD10734-MSD1)		**Source: D1D1180-01**	Prepared & Analyzed: 04/13/2021							
Chloride	23.8	2.00	mg/L	20.0	3.91	99.5	75-125	2.04	20	
Batch DD10878 - Wet-Digestion-W - EPA 351.1										
Blank (DD10878-BLK1)			Prepared: 04/14/2021 Analyzed: 04/19/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L							
LCS (DD10878-BS1)			Prepared: 04/14/2021 Analyzed: 04/19/2021							
Total Kjeldahl Nitrogen (TKN)	5.01	0.200	mg/L	5.00		100	90-110			
Duplicate (DD10878-DUP1)		**Source: D1D1026-02**	Prepared: 04/14/2021 Analyzed: 04/19/2021							
Total Kjeldahl Nitrogen (TKN)	14.2	0.200	mg/L		14.0			1.67	20	
Matrix Spike (DD10878-MS1)		**Source: D1D1026-02**	Prepared: 04/14/2021 Analyzed: 04/19/2021							
Total Kjeldahl Nitrogen (TKN)	24.9	0.400	mg/L	10.0	14.0	110	90-110			
Matrix Spike (DD10878-MS2)		**Source: D1D1122-03**	Prepared: 04/14/2021 Analyzed: 04/19/2021							
Total Kjeldahl Nitrogen (TKN)	15.5	0.200	mg/L	10.0	5.22	103	90-110			

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10670 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DD10670-BLK1)			Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	<0.0050	0.0050	mg/L							
Copper	<0.0020	0.0020	mg/L							
Sodium	<1.00	1.00	mg/L							
LCS (DD10670-BS1)			Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	0.524	0.0050	mg/L	0.500		105	85-115			
Copper	0.515	0.0020	mg/L	0.500		103	85-115			
Sodium	10.4	1.00	mg/L	10.5		99.3	85-115			
Duplicate (DD10670-DUP1)		**Source: D1D0975-02**	Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	0.0198	0.0050	mg/L		0.0215			8.41	20	

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10670 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Duplicate (DD10670-DUP1)	**Source: D1D0975-02**		Prepared: 04/12/2021 Analyzed: 04/13/2021							
Copper	<0.0020	0.0020	mg/L		ND				20	
Sodium	156	1.00	mg/L		154			1.10	20	
Matrix Spike (DD10670-MS1)	**Source: D1D0944-01**		Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	0.527	0.0050	mg/L	0.500	0.0088	104	70-130			
Copper	0.514	0.0020	mg/L	0.500	ND	103	70-130			
Sodium	13.4	1.00	mg/L	10.5	3.06	98.4	70-130			
Matrix Spike (DD10670-MS2)	**Source: D1D0975-01**		Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	0.524	0.0050	mg/L	0.500	0.0130	102	70-130			
Copper	0.513	0.0020	mg/L	0.500	0.0032	102	70-130			
Sodium	47.2	1.00	mg/L	10.5	37.2	95.3	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10775 - 624.1 - EPA 624.1										
Blank (DD10775-BLK1)			Prepared & Analyzed: 04/09/2021							
Acrolein	<20.0	20.0	ug/L							
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*50.7*		ug/L	*50.0*		*101*	*70-130*			
Surrogate: Toluene-d8	*52.3*		ug/L	*50.0*		*105*	*70-130*			
Surrogate: Pentafluorobenzene	*49.4*		ug/L	*50.0*		*98.7*	*70-130*			
LCS (DD10775-BS1)			Prepared & Analyzed: 04/09/2021							
Acrolein	44.6	20.0	ug/L	50.0		89.2	60-140			
2-Chloroethyl vinyl ether	57.0	20.0	ug/L	50.0		114	1-305			
Surrogate: 1,2-Dichloroethane-d4	*48.8*		ug/L	*50.0*		*97.5*	*70-130*			
Surrogate: Toluene-d8	*49.7*		ug/L	*50.0*		*99.4*	*70-130*			
Surrogate: Pentafluorobenzene	*51.2*		ug/L	*50.0*		*102*	*70-130*			
Matrix Spike (DD10775-MS1)	**Source: L1D0100-02**		Prepared & Analyzed: 04/09/2021							
Acrolein	69.3	20.0	ug/L	50.0	ND	139	40-160			
2-Chloroethyl vinyl ether	45.4	20.0	ug/L	50.0	ND	90.9	1-305			
Surrogate: 1,2-Dichloroethane-d4	*49.6*		ug/L	*50.0*		*99.2*	*70-130*			
Surrogate: Toluene-d8	*52.3*		ug/L	*50.0*		*105*	*70-130*			
Surrogate: Pentafluorobenzene	*49.2*		ug/L	*50.0*		*98.3*	*70-130*			
Matrix Spike Dup (DD10775-MSD1)	**Source: L1D0100-02**		Prepared & Analyzed: 04/09/2021							
Acrolein	72.6	20.0	ug/L	50.0	ND	145	40-160	4.68	60	
2-Chloroethyl vinyl ether	38.7	20.0	ug/L	50.0	ND	77.5	1-305	15.9	71	
Surrogate: 1,2-Dichloroethane-d4	*50.8*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Toluene-d8	*53.8*		ug/L	*50.0*		*108*	*70-130*			
Surrogate: Pentafluorobenzene	*49.2*		ug/L	*50.0*		*98.5*	*70-130*			
Batch DD10776 - 624.1 - EPA 624.1										
Blank (DD10776-BLK1)			Prepared & Analyzed: 04/12/2021							
Acetone	<10.0	10.0	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10776 - 624.1 - EPA 624.1										
Blank (DD10776-BLK1)			Prepared & Analyzed: 04/12/2021							
Acrylonitrile	<20.0	20.0	ug/L							
Benzene	<5.00	5.00	ug/L							
Bromodichloromethane	<5.00	5.00	ug/L							
Bromoform	<5.00	5.00	ug/L							
Bromomethane	<5.00	5.00	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Carbon disulfide	<5.00	5.00	ug/L							
Carbon tetrachloride	<5.00	5.00	ug/L							
Chlorobenzene	<5.00	5.00	ug/L							
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L							
Chloroform	<4.00	4.00	ug/L							
Chloromethane	<5.00	5.00	ug/L							
Dibromochloromethane	<5.00	5.00	ug/L							
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L							
1,2-Dichlorobenzene	<5.00	5.00	ug/L							
1,3-Dichlorobenzene	<5.00	5.00	ug/L							
1,4-Dichlorobenzene	<5.00	5.00	ug/L							
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L							
1,2-Dichloroethane	<5.00	5.00	ug/L							
1,1-Dichloroethane	<5.00	5.00	ug/L							
cis-1,2-Dichloroethene	<5.00	5.00	ug/L							
1,1-Dichloroethene	<5.00	5.00	ug/L							
trans-1,2-Dichloroethene	<4.00	4.00	ug/L							
1,2-Dichloropropane	<5.00	5.00	ug/L							
cis-1,3-Dichloropropene	<5.00	5.00	ug/L							
trans-1,3-Dichloropropene	<5.00	5.00	ug/L							
Ethylbenzene	<5.00	5.00	ug/L							
2-Hexanone (MBK)	<10.0	10.0	ug/L							
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L							
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L							
Styrene	<5.00	5.00	ug/L							
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L							
Tetrachloroethene	<5.00	5.00	ug/L							
Toluene	<5.00	5.00	ug/L							
1,1,2-Trichloroethane	<5.00	5.00	ug/L							
1,1,1-Trichloroethane	<5.00	5.00	ug/L							
Trichloroethene	<5.00	5.00	ug/L							
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L							
Vinyl chloride	<5.00	5.00	ug/L							
m,p-Xylene	<10.0	10.0	ug/L							
o-Xylene	<5.00	5.00	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10776 - 624.1 - EPA 624.1										
Blank (DD10776-BLK1)			Prepared & Analyzed: 04/12/2021							
Vinyl acetate	<5.00	5.00	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*49.4*		ug/L	*50.0*		*98.8*	*70-130*			
Surrogate: Toluene-d8	*52.4*		ug/L	*50.0*		*105*	*70-130*			
LCS (DD10776-BS1)			Prepared & Analyzed: 04/12/2021							
Acetone	34.3	10.0	ug/L	50.0		68.6	42.1-136			
Acrylonitrile	43.8	20.0	ug/L	50.0		87.6	60-140			
Benzene	53.5	5.00	ug/L	50.0		107	65-135			
Bromodichloromethane	53.1	5.00	ug/L	50.0		106	65-135			
Bromoform	52.8	5.00	ug/L	50.0		106	70-130			
Bromomethane	42.6	5.00	ug/L	50.0		85.3	15-185			
2-Butanone (MEK)	42.8	10.0	ug/L	50.0		85.6	63.1-143			
Carbon disulfide	42.4	5.00	ug/L	50.0		84.7	63.5-124			
Carbon tetrachloride	55.0	5.00	ug/L	50.0		110	70-130			
Chlorobenzene	53.3	5.00	ug/L	50.0		107	65-135			
Chloroethane (Ethyl chloride)	50.7	5.00	ug/L	50.0		101	40-160			
Chloroform	53.5	4.00	ug/L	50.0		107	70-135			
Chloromethane	61.9	5.00	ug/L	50.0		124	1-205			
Dibromochloromethane	58.3	5.00	ug/L	50.0		117	70-135			
Dibromomethane (Methylene bromide)	49.7	5.00	ug/L	50.0		99.5	73.8-124			
1,2-Dichlorobenzene	52.7	5.00	ug/L	50.0		105	65-135			
1,3-Dichlorobenzene	55.5	5.00	ug/L	50.0		111	70-130			
1,4-Dichlorobenzene	52.5	5.00	ug/L	50.0		105	65-135			
Dichlorodifluoromethane (Freon-12)	50.4	5.00	ug/L	50.0		101	34.7-129			
1,2-Dichloroethane	53.3	5.00	ug/L	50.0		107	70-130			
1,1-Dichloroethane	50.8	5.00	ug/L	50.0		102	70-130			
cis-1,2-Dichloroethene	48.9	5.00	ug/L	50.0		97.8	75.5-125			
1,1-Dichloroethene	57.1	5.00	ug/L	50.0		114	50-150			
trans-1,2-Dichloroethene	55.4	4.00	ug/L	50.0		111	70-130			
1,2-Dichloropropane	52.3	5.00	ug/L	50.0		105	35-165			
cis-1,3-Dichloropropene	55.4	5.00	ug/L	50.0		111	25-175			
trans-1,3-Dichloropropene	48.6	5.00	ug/L	50.0		97.2	50-150			
Ethylbenzene	53.4	5.00	ug/L	50.0		107	60-140			
2-Hexanone (MBK)	43.7	10.0	ug/L	50.0		87.4	73.6-130			
Methyl tert-butyl ether (MTBE)	39.7	5.00	ug/L	50.0		79.3	69-151			
Methylene chloride (Dichloromethane)	60.4	1.00	ug/L	50.0		121	60-140			
4-Methyl-2-pentanone (MIBK)	44.8	10.0	ug/L	50.0		89.6	72.5-129			
Styrene	54.6	5.00	ug/L	50.0		109	79.2-127			
1,1,2,2-Tetrachloroethane	52.9	5.00	ug/L	50.0		106	60-140			
Tetrachloroethene	55.4	5.00	ug/L	50.0		111	70-130			
Toluene	51.8	5.00	ug/L	50.0		104	70-130			
1,1,2-Trichloroethane	54.4	5.00	ug/L	50.0		109	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10776 - 624.1 - EPA 624.1										
LCS (DD10776-BS1)			Prepared & Analyzed: 04/12/2021							
1,1,1-Trichloroethane	55.0	5.00	ug/L	50.0		110	70-130			
Trichloroethene	54.5	5.00	ug/L	50.0		109	65-135			
Trichlorofluoromethane (Freon 11)	55.2	5.00	ug/L	50.0		110	50-150			
Vinyl chloride	54.9	5.00	ug/L	50.0		110	5-195			
m,p-Xylene	118	10.0	ug/L	100		118	77.1-129			
o-Xylene	57.5	5.00	ug/L	50.0		115	78.8-126			
Vinyl acetate	34.2	5.00	ug/L	50.0		68.3	60-140			
Surrogate: 1,2-Dichloroethane-d4	*46.4*		ug/L	*50.0*		*92.8*	*70-130*			
Surrogate: Toluene-d8	*50.2*		ug/L	*50.0*		*100*	*70-130*			
Surrogate: Pentafluorobenzene	*51.6*		ug/L	*50.0*		*103*	*70-130*			

Definitions

A5:	Sample was filtered (0.45 um) before analysis.
D1:	The sample was diluted during sample preparation (extraction, distillation or digestion) due to matrix interference.
MCL:	US EPA Maximum Contaminant Level
mg CaCO3/L	Milligrams Calcium Carbonate per Liter
mg/L:	Milligrams per Liter
RL:	Reporting Limit
RPD:	Relative Percent Difference
ug/L:	Micrograms per Liter
Y1:	Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 4.9°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville
M-CT008 Massachusetts Department of Environmental Protection

CERTIFICATE OF ANALYSIS

D1D0986

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Melisa L. Montgomery
Quality Assurance Officer
Reported: 04/20/2021 16:54

MICROBAC

61 L
Tel:

CHAIN OF CUSTODY FORM

D 1 D 0 9 8 6

W & C - Plymouth

Microbac Laboratories, Inc.

FOR LAB USE ONLY

Lab WO#

Project Manager

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360

DELIVERY: ROBERT BLANCHARD

E-MAIL:

PHONE: 508-830-4159 FAX: 508-732-0238

Project Information

.C.

ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360

PURCHASE ORDER #

ATTENTION: ACCOUNTS PAYABLE

PHONE: 508-830-4159

PROJECT: PLYMOUTH, MA WWTP

LOCATION: ID 11773
WELLS - QUARTERLY

ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL
ROBERT SCOTT

PHONE: CELL - 860-204-7988

FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # A10 (250 mL)	4/8/21	10:16		X	WW	1	X	X											X			
Well # A10 (250 mL)	4/8/21	10:16		X	WW	1			X	X								X				
Well # A10 (250 mL)(filtered)	4/8/21	10:16		X	WW	1					X							X				
Well # A10 (250 mL)	4/8/21	10:16		X	WW	1						X						X				
Well # A10 (250 mL)	4/8/21	10:16		X	WW	1							X					X				
Well # A10 (250 mL)	4/8/21	10:16		X	WW	1								X	X	X					X	
Well # A10 (40 mL vial)	4/8/21	10:16		X	WW	2			PRESERVATIVE								X	X				
Well # A10 (40 mL vial)	4/8/21	10:16		X	WW	#2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER: Ryan Gorman	4/8/21	
RECEIVED:		
RELINQUISHED:		
CEIVED:	4.8.2021	1455
LINQUISHED:	4.8.2021	1700
CEIVED:	4.8.21	0700

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☐ AMBIENT ☐ 4.9°C

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1D0987

Project Description

Wells - Quarterly

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Tuesday, April 20, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

MICROBAC®

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1D0987

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Quarterly

Project / PO Number: 346346
Received: 04/08/2021
Reported: 04/20/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well A16	D1D0987-01	Groundwater	Grab		04/08/21 12:27	04/08/21 17:00
Well A16	D1D0987-02	Groundwater	Grab		04/08/21 12:27	04/08/21 17:00
Well A16 (filtered)	D1D0987-03	Groundwater	Grab		04/08/21 12:27	04/08/21 17:00
Well A16	D1D0987-04	Groundwater	Grab		04/08/21 12:27	04/08/21 17:00
Well A16	D1D0987-05	Groundwater	Grab		04/08/21 12:27	04/08/21 17:00
Well A16	D1D0987-06	Groundwater	Grab		04/08/21 12:27	04/08/21 17:00
Well A16	D1D0987-07	Groundwater	Grab		04/08/21 12:27	04/08/21 17:00
Well A16	D1D0987-08	Groundwater	Grab		04/08/21 12:27	04/08/21 17:00

CERTIFICATE OF ANALYSIS

D1D0987

Analytical Testing Parameters

Client Sample ID: Well A16
Sample Matrix: Groundwater
Lab Sample ID: D1D0987-01
Collected By: Customer
Collection Date: 04/08/2021 12:27

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 351.1								
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L	1		04/14/21 1011	04/19/21 1356	CLW
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0117**	0.0106	mg/L	1		04/12/21 1800	04/13/21 1348	CLW

Client Sample ID: Well A16
Sample Matrix: Groundwater
Lab Sample ID: D1D0987-02
Collected By: Customer
Collection Date: 04/08/2021 12:27

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-NO_3^- F-2011								
Nitrate as N	**0.436**	0.0500	mg/L	1			04/08/21 1936	DJM
Nitrite as N	<0.0100	0.0100	mg/L	1	**Y1**		04/08/21 1936	DJM

Client Sample ID: Well A16 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1D0987-03
Collected By: Customer
Collection Date: 04/08/2021 12:27

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0130**	0.0100	mg/L	1		04/08/21 1818	04/08/21 1929	DJM

Client Sample ID: Well A16
Sample Matrix: Groundwater
Lab Sample ID: D1D0987-04
Collected By: Customer
Collection Date: 04/08/2021 12:27

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 2320 B-2011								
Alkalinity to pH 4.5	**5.50**	1.00	mg CaCO3/L	1			04/12/21 1600	SRF

Client Sample ID: Well A16
Sample Matrix: Groundwater
Lab Sample ID: D1D0987-05
Collected By: Customer
Collection Date: 04/08/2021 12:27

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-Cl E-2011								
Chloride	**109**	4.00	mg/L	2			04/13/21 1410	CLW

CERTIFICATE OF ANALYSIS

D1D0987

Client Sample ID:	Well A16		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D0987-06	**Collection Date:**	04/08/2021 12:27

Metals Total by ICP	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.7, Rv. 4.4 (1994)								
Boron	**0.0142**	0.0050	mg/L	1	**Y1**	04/12/21 1441	04/13/21 1912	JDF
Copper	<0.0020	0.0020	mg/L	1		04/12/21 1441	04/13/21 1912	JDF
Sodium	**51.5**	1.00	mg/L	1		04/12/21 1441	04/13/21 1912	JDF

Client Sample ID:	Well A16		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D0987-07	**Collection Date:**	04/08/2021 12:27

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acrolein	<20.0	20.0	ug/L	1			04/10/21 0047	JAN
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	1			04/10/21 0047	JAN
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 70-130	% Rec	1			04/10/21 0047	JAN
Surrogate: Toluene-d8	100	Limit: 70-130	% Rec	1			04/10/21 0047	JAN
Surrogate: Pentafluorobenzene	102	Limit: 70-130	% Rec	1			04/10/21 0047	JAN

CERTIFICATE OF ANALYSIS

D1D0987

Client Sample ID:	Well A16		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D0987-08	**Collection Date:**	04/08/2021 12:27

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acetone	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1818	JAN
Acrylonitrile	<20.0	20.0	ug/L	1			04/12/21 1818	JAN
Benzene	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
Bromodichloromethane	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
Bromoform	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
Bromomethane	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
2-Butanone (MEK)	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1818	JAN
Carbon disulfide	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1818	JAN
Carbon tetrachloride	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
Chlorobenzene	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
Chloroform	<4.00	4.00	ug/L	1			04/12/21 1818	JAN
Chloromethane	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
Dibromochloromethane	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1818	JAN
1,2-Dichlorobenzene	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
1,3-Dichlorobenzene	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
1,4-Dichlorobenzene	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1818	JAN
1,2-Dichloroethane	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
1,1-Dichloroethane	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
cis-1,2-Dichloroethene	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1818	JAN
1,1-Dichloroethene	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
trans-1,2-Dichloroethene	<4.00	4.00	ug/L	1			04/12/21 1818	JAN
1,2-Dichloropropane	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
cis-1,3-Dichloropropene	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
trans-1,3-Dichloropropene	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
Ethylbenzene	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
2-Hexanone (MBK)	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1818	JAN
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1818	JAN
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L	1			04/12/21 1818	JAN
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1818	JAN
Styrene	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1818	JAN
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
Tetrachloroethene	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
Toluene	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
1,1,2-Trichloroethane	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
1,1,1-Trichloroethane	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
Trichloroethene	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
Vinyl chloride	<5.00	5.00	ug/L	1			04/12/21 1818	JAN
m,p-Xylene	<10.0	10.0	ug/L	1	**Y1**		04/12/21 1818	JAN

CERTIFICATE OF ANALYSIS

D1D0987

Client Sample ID:	Well A16		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D0987-08	**Collection Date:**	04/08/2021 12:27

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
o-Xylene	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1818	JAN
Vinyl acetate	<5.00	5.00	ug/L	1	**Y1**		04/12/21 1818	JAN
Surrogate: 1,2-Dichloroethane-d4	94.6	Limit: 70-130	% Rec	1			04/12/21 1818	JAN
Surrogate: Toluene-d8	105	Limit: 70-130	% Rec	1			04/12/21 1818	JAN
Surrogate: Pentafluorobenzene	98.9	Limit: 70-130	% Rec	1			04/12/21 1818	JAN

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-$NO3^-$ F-2011	DD10534	DD10534-BS1	
		DD10534-BS2	
		DD10534-BLK1	
		DD10534-BLK1	
		DD10534-DUP1	D1D0913-02
		DD10534-DUP1	D1D0913-02
		DD10534-MS1	D1D0913-02
		DD10534-MS1	D1D0913-02
		DD10534-MSD1	D1D0913-02
		DD10534-MSD1	D1D0913-02
		D1D0987-02	Well A16
		D1D0987-02	Well A16

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DD10566	DD10566-BLK1	
		DD10566-BS1	
		DD10566-DUP1	D1D0986-03
		DD10566-MS1	D1D0986-03
		D1D0987-03	Well A16 (filtered)
		DD10566-MS2	D1D0987-03

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.7, Rv. 4.4 (1994)	DD10670	DD10670-BLK1	
		DD10670-BS1	
		DD10670-DUP1	D1D0975-02
		DD10670-MS1	D1D0944-01
		DD10670-MS2	D1D0975-01
		D1D0987-06	Well A16
		D1D0987-06	Well A16

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DD10690	DD10690-BS1	
		DD10690-BLK1	
		DD10690-DUP1	D1D0991-05
		DD10690-MS1	D1D0991-05
		DD10690-MS2	L1D0148-01
		D1D0987-01	Well A16

Method	Batch	Laboratory ID	Client / Source ID
SM 2320 B-2011	DD10715	DD10715-BS1	
		DD10715-DUP1	D1D0984-04

SM 2320 B-2011	DD10715	DD10715-BLK1	
		D1D0987-04	Well A16

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-Cl E-2011	DD10734	DD10734-BS1	
		DD10734-BLK1	
		DD10734-DUP1	D1D1180-01
		DD10734-MS1	D1D1180-01
		DD10734-MSD1	D1D1180-01
		D1D0987-05	Well A16

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DD10775	DD10775-BS1	
		DD10775-BLK1	
		DD10775-MS1	L1D0100-02
		DD10775-MSD1	L1D0100-02
		D1D0987-07	Well A16

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DD10776	DD10776-BS1	
		DD10776-BLK1	
		D1D0987-08	Well A16

Method	Batch	Laboratory ID	Client / Source ID
EPA 351.1	DD10878	DD10878-BS1	
		DD10878-BLK1	
		DD10878-DUP1	D1D1026-02
		DD10878-MS2	D1D1122-03
		D1D0987-01	Well A16
		DD10878-MS1	D1D1026-02

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10534 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Blank (DD10534-BLK1)			Prepared & Analyzed: 04/08/2021							
Nitrite as N	<0.0100	0.0100	mg/L							
Nitrate as N	<0.0500	0.0500	mg/L							
LCS (DD10534-BS1)			Prepared & Analyzed: 04/08/2021							
Nitrate as N	5.04	0.0500	mg/L	5.00		101	90-110			
LCS (DD10534-BS2)			Prepared & Analyzed: 04/08/2021							
Nitrite as N	0.999	0.0100	mg/L	1.00		99.9	90-110			
Duplicate (DD10534-DUP1)	**Source: D1D0913-02**		Prepared & Analyzed: 04/08/2021							
Nitrite as N	<0.0100	0.0100	mg/L		0.00360			0.00	20	A5

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10534 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Duplicate (DD10534-DUP1)		**Source: D1D0913-02**	Prepared & Analyzed: 04/08/2021							
Nitrate as N	<0.0500	0.0500	mg/L		ND				20	A5
Matrix Spike (DD10534-MS1)		**Source: D1D0913-02**	Prepared & Analyzed: 04/08/2021							
Nitrite as N	0.979	0.0100	mg/L	1.00	0.00360	97.6	75-125			A5
Nitrate as N	4.92	0.0500	mg/L	5.00	ND	98.3	75-125			A5
Matrix Spike Dup (DD10534-MSD1)		**Source: D1D0913-02**	Prepared & Analyzed: 04/08/2021							
Nitrite as N	0.976	0.0100	mg/L	1.00	0.00360	97.3	75-125	0.317	20	A5
Nitrate as N	4.87	0.0500	mg/L	5.00	ND	97.5	75-125	0.854	20	A5
Batch DD10566 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DD10566-BLK1)			Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DD10566-BS1)			Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	0.985	0.0100	mg/L	1.00		98.4	90-110			
Duplicate (DD10566-DUP1)		**Source: D1D0986-03**	Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L		ND				20	
Matrix Spike (DD10566-MS1)		**Source: D1D0986-03**	Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	1.01	0.0100	mg/L	1.00	ND	101	90-110			
Matrix Spike (DD10566-MS2)		**Source: D1D0987-03**	Prepared & Analyzed: 04/08/2021							
Ortho-phosphate as P	0.994	0.0100	mg/L	1.00	0.0130	98.0	90-110			
Batch DD10690 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DD10690-BLK1)			Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DD10690-BS1)			Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	1.01	0.0106	mg/L	1.00		101	90-110			
Duplicate (DD10690-DUP1)		**Source: D1D0991-05**	Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	0.0669	0.0106	mg/L		0.0616			8.26	20	
Matrix Spike (DD10690-MS1)		**Source: D1D0991-05**	Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	1.30	0.0106	mg/L	1.25	0.0616	99.4	90-110			
Matrix Spike (DD10690-MS2)		**Source: L1D0148-01**	Prepared: 04/12/2021 Analyzed: 04/13/2021							
Phosphorus - Total as P	1.31	0.0106	mg/L	1.25	0.0786	98.4	90-110			
Batch DD10715 - Wet Chem - W - SM 2320 B-2011										
Blank (DD10715-BLK1)			Prepared & Analyzed: 04/12/2021							
Alkalinity to pH 4.5	<1.00	1.00	mg CaCO3/ L							
LCS (DD10715-BS1)			Prepared & Analyzed: 04/12/2021							
Alkalinity to pH 4.5	50.0	1.00	mg CaCO3/ L	25000		0.200	90-110			

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10715 - Wet Chem - W - SM 2320 B-2011										
Duplicate (DD10715-DUP1)		**Source: D1D0984-04**	Prepared & Analyzed: 04/12/2021							
Alkalinity to pH 4.5	40.0	1.00	mg CaCO3/ L		40.0			0.00	20	
Batch DD10734 - Wet Chem - W - SM 4500-Cl E-2011										
Blank (DD10734-BLK1)			Prepared & Analyzed: 04/13/2021							
Chloride	<2.00	2.00	mg/L							
LCS (DD10734-BS1)			Prepared & Analyzed: 04/13/2021							
Chloride	18.9	2.00	mg/L	20.0		94.6	90-110			
Duplicate (DD10734-DUP1)		**Source: D1D1180-01**	Prepared & Analyzed: 04/13/2021							
Chloride	3.85	2.00	mg/L		3.91			1.42	20	
Matrix Spike (DD10734-MS1)		**Source: D1D1180-01**	Prepared & Analyzed: 04/13/2021							
Chloride	23.3	2.00	mg/L	20.0	3.91	97.1	75-125			
Matrix Spike Dup (DD10734-MSD1)		**Source: D1D1180-01**	Prepared & Analyzed: 04/13/2021							
Chloride	23.8	2.00	mg/L	20.0	3.91	99.5	75-125	2.04	20	
Batch DD10878 - Wet-Digestion-W - EPA 351.1										
Blank (DD10878-BLK1)			Prepared: 04/14/2021 Analyzed: 04/19/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L							
LCS (DD10878-BS1)			Prepared: 04/14/2021 Analyzed: 04/19/2021							
Total Kjeldahl Nitrogen (TKN)	5.01	0.200	mg/L	5.00		100	90-110			
Duplicate (DD10878-DUP1)		**Source: D1D1026-02**	Prepared: 04/14/2021 Analyzed: 04/19/2021							
Total Kjeldahl Nitrogen (TKN)	14.2	0.200	mg/L		14.0			1.67	20	
Matrix Spike (DD10878-MS1)		**Source: D1D1026-02**	Prepared: 04/14/2021 Analyzed: 04/19/2021							
Total Kjeldahl Nitrogen (TKN)	24.9	0.400	mg/L	10.0	14.0	110	90-110			
Matrix Spike (DD10878-MS2)		**Source: D1D1122-03**	Prepared: 04/14/2021 Analyzed: 04/19/2021							
Total Kjeldahl Nitrogen (TKN)	15.5	0.200	mg/L	10.0	5.22	103	90-110			

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10670 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DD10670-BLK1)			Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	<0.0050	0.0050	mg/L							
Copper	<0.0020	0.0020	mg/L							
Sodium	<1.00	1.00	mg/L							
LCS (DD10670-BS1)			Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	0.524	0.0050	mg/L	0.500		105	85-115			
Copper	0.515	0.0020	mg/L	0.500		103	85-115			
Sodium	10.4	1.00	mg/L	10.5		99.3	85-115			
Duplicate (DD10670-DUP1)		**Source: D1D0975-02**	Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	0.0198	0.0050	mg/L		0.0215			8.41	20	

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10670 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Duplicate (DD10670-DUP1)	**Source: D1D0975-02**		Prepared: 04/12/2021 Analyzed: 04/13/2021							
Copper	<0.0020	0.0020	mg/L		ND				20	
Sodium	156	1.00	mg/L		154			1.10	20	
Matrix Spike (DD10670-MS1)	**Source: D1D0944-01**		Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	0.527	0.0050	mg/L	0.500	0.0088	104	70-130			
Copper	0.514	0.0020	mg/L	0.500	ND	103	70-130			
Sodium	13.4	1.00	mg/L	10.5	3.06	98.4	70-130			
Matrix Spike (DD10670-MS2)	**Source: D1D0975-01**		Prepared: 04/12/2021 Analyzed: 04/13/2021							
Boron	0.524	0.0050	mg/L	0.500	0.0130	102	70-130			
Copper	0.513	0.0020	mg/L	0.500	0.0032	102	70-130			
Sodium	47.2	1.00	mg/L	10.5	37.2	95.3	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10775 - 624.1 - EPA 624.1										
Blank (DD10775-BLK1)			Prepared & Analyzed: 04/09/2021							
Acrolein	<20.0	20.0	ug/L							
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*50.7*		ug/L	*50.0*		*101*	*70-130*			
Surrogate: Toluene-d8	*52.3*		ug/L	*50.0*		*105*	*70-130*			
Surrogate: Pentafluorobenzene	*49.4*		ug/L	*50.0*		*98.7*	*70-130*			
LCS (DD10775-BS1)			Prepared & Analyzed: 04/09/2021							
Acrolein	44.6	20.0	ug/L	50.0		89.2	60-140			
2-Chloroethyl vinyl ether	57.0	20.0	ug/L	50.0		114	1-305			
Surrogate: 1,2-Dichloroethane-d4	*48.8*		ug/L	*50.0*		*97.5*	*70-130*			
Surrogate: Toluene-d8	*49.7*		ug/L	*50.0*		*99.4*	*70-130*			
Surrogate: Pentafluorobenzene	*51.2*		ug/L	*50.0*		*102*	*70-130*			
Matrix Spike (DD10775-MS1)	**Source: L1D0100-02**		Prepared & Analyzed: 04/09/2021							
Acrolein	69.3	20.0	ug/L	50.0	ND	139	40-160			
2-Chloroethyl vinyl ether	45.4	20.0	ug/L	50.0	ND	90.9	1-305			
Surrogate: 1,2-Dichloroethane-d4	*49.6*		ug/L	*50.0*		*99.2*	*70-130*			
Surrogate: Toluene-d8	*52.3*		ug/L	*50.0*		*105*	*70-130*			
Surrogate: Pentafluorobenzene	*49.2*		ug/L	*50.0*		*98.3*	*70-130*			
Matrix Spike Dup (DD10775-MSD1)	**Source: L1D0100-02**		Prepared & Analyzed: 04/09/2021							
Acrolein	72.6	20.0	ug/L	50.0	ND	145	40-160	4.68	60	
2-Chloroethyl vinyl ether	38.7	20.0	ug/L	50.0	ND	77.5	1-305	15.9	71	
Surrogate: 1,2-Dichloroethane-d4	*50.8*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Toluene-d8	*53.8*		ug/L	*50.0*		*108*	*70-130*			
Surrogate: Pentafluorobenzene	*49.2*		ug/L	*50.0*		*98.5*	*70-130*			
Batch DD10776 - 624.1 - EPA 624.1										
Blank (DD10776-BLK1)			Prepared & Analyzed: 04/12/2021							
Acetone	<10.0	10.0	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10776 - 624.1 - EPA 624.1										
Blank (DD10776-BLK1)			Prepared & Analyzed: 04/12/2021							
Acrylonitrile	<20.0	20.0	ug/L							
Benzene	<5.00	5.00	ug/L							
Bromodichloromethane	<5.00	5.00	ug/L							
Bromoform	<5.00	5.00	ug/L							
Bromomethane	<5.00	5.00	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Carbon disulfide	<5.00	5.00	ug/L							
Carbon tetrachloride	<5.00	5.00	ug/L							
Chlorobenzene	<5.00	5.00	ug/L							
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L							
Chloroform	<4.00	4.00	ug/L							
Chloromethane	<5.00	5.00	ug/L							
Dibromochloromethane	<5.00	5.00	ug/L							
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L							
1,2-Dichlorobenzene	<5.00	5.00	ug/L							
1,3-Dichlorobenzene	<5.00	5.00	ug/L							
1,4-Dichlorobenzene	<5.00	5.00	ug/L							
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L							
1,2-Dichloroethane	<5.00	5.00	ug/L							
1,1-Dichloroethane	<5.00	5.00	ug/L							
cis-1,2-Dichloroethene	<5.00	5.00	ug/L							
1,1-Dichloroethene	<5.00	5.00	ug/L							
trans-1,2-Dichloroethene	<4.00	4.00	ug/L							
1,2-Dichloropropane	<5.00	5.00	ug/L							
cis-1,3-Dichloropropene	<5.00	5.00	ug/L							
trans-1,3-Dichloropropene	<5.00	5.00	ug/L							
Ethylbenzene	<5.00	5.00	ug/L							
2-Hexanone (MBK)	<10.0	10.0	ug/L							
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L							
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L							
Styrene	<5.00	5.00	ug/L							
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L							
Tetrachloroethene	<5.00	5.00	ug/L							
Toluene	<5.00	5.00	ug/L							
1,1,2-Trichloroethane	<5.00	5.00	ug/L							
1,1,1-Trichloroethane	<5.00	5.00	ug/L							
Trichloroethene	<5.00	5.00	ug/L							
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L							
Vinyl chloride	<5.00	5.00	ug/L							
m,p-Xylene	<10.0	10.0	ug/L							
o-Xylene	<5.00	5.00	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10776 - 624.1 - EPA 624.1										
Blank (DD10776-BLK1)				Prepared & Analyzed: 04/12/2021						
Vinyl acetate	<5.00	5.00	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*49.4*		ug/L	*50.0*		*98.8*	*70-130*			
Surrogate: Toluene-d8	*52.4*		ug/L	*50.0*		*105*	*70-130*			
LCS (DD10776-BS1)				Prepared & Analyzed: 04/12/2021						
Acetone	34.3	10.0	ug/L	50.0		68.6	42.1-136			
Acrylonitrile	43.8	20.0	ug/L	50.0		87.6	60-140			
Benzene	53.5	5.00	ug/L	50.0		107	65-135			
Bromodichloromethane	53.1	5.00	ug/L	50.0		106	65-135			
Bromoform	52.8	5.00	ug/L	50.0		106	70-130			
Bromomethane	42.6	5.00	ug/L	50.0		85.3	15-185			
2-Butanone (MEK)	42.8	10.0	ug/L	50.0		85.6	63.1-143			
Carbon disulfide	42.4	5.00	ug/L	50.0		84.7	63.5-124			
Carbon tetrachloride	55.0	5.00	ug/L	50.0		110	70-130			
Chlorobenzene	53.3	5.00	ug/L	50.0		107	65-135			
Chloroethane (Ethyl chloride)	50.7	5.00	ug/L	50.0		101	40-160			
Chloroform	53.5	4.00	ug/L	50.0		107	70-135			
Chloromethane	61.9	5.00	ug/L	50.0		124	1-205			
Dibromochloromethane	58.3	5.00	ug/L	50.0		117	70-135			
Dibromomethane (Methylene bromide)	49.7	5.00	ug/L	50.0		99.5	73.8-124			
1,2-Dichlorobenzene	52.7	5.00	ug/L	50.0		105	65-135			
1,3-Dichlorobenzene	55.5	5.00	ug/L	50.0		111	70-130			
1,4-Dichlorobenzene	52.5	5.00	ug/L	50.0		105	65-135			
Dichlorodifluoromethane (Freon-12)	50.4	5.00	ug/L	50.0		101	34.7-129			
1,2-Dichloroethane	53.3	5.00	ug/L	50.0		107	70-130			
1,1-Dichloroethane	50.8	5.00	ug/L	50.0		102	70-130			
cis-1,2-Dichloroethene	48.9	5.00	ug/L	50.0		97.8	75.5-125			
1,1-Dichloroethene	57.1	5.00	ug/L	50.0		114	50-150			
trans-1,2-Dichloroethene	55.4	4.00	ug/L	50.0		111	70-130			
1,2-Dichloropropane	52.3	5.00	ug/L	50.0		105	35-165			
cis-1,3-Dichloropropene	55.4	5.00	ug/L	50.0		111	25-175			
trans-1,3-Dichloropropene	48.6	5.00	ug/L	50.0		97.2	50-150			
Ethylbenzene	53.4	5.00	ug/L	50.0		107	60-140			
2-Hexanone (MBK)	43.7	10.0	ug/L	50.0		87.4	73.6-130			
Methyl tert-butyl ether (MTBE)	39.7	5.00	ug/L	50.0		79.3	69-151			
Methylene chloride (Dichloromethane)	60.4	1.00	ug/L	50.0		121	60-140			
4-Methyl-2-pentanone (MIBK)	44.8	10.0	ug/L	50.0		89.6	72.5-129			
Styrene	54.6	5.00	ug/L	50.0		109	79.2-127			
1,1,2,2-Tetrachloroethane	52.9	5.00	ug/L	50.0		106	60-140			
Tetrachloroethene	55.4	5.00	ug/L	50.0		111	70-130			
Toluene	51.8	5.00	ug/L	50.0		104	70-130			
1,1,2-Trichloroethane	54.4	5.00	ug/L	50.0		109	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10776 - 624.1 - EPA 624.1										
LCS (DD10776-BS1)			Prepared & Analyzed: 04/12/2021							
1,1,1-Trichloroethane	55.0	5.00	ug/L	50.0		110	70-130			
Trichloroethene	54.5	5.00	ug/L	50.0		109	65-135			
Trichlorofluoromethane (Freon 11)	55.2	5.00	ug/L	50.0		110	50-150			
Vinyl chloride	54.9	5.00	ug/L	50.0		110	5-195			
m,p-Xylene	118	10.0	ug/L	100		118	77.1-129			
o-Xylene	57.5	5.00	ug/L	50.0		115	78.8-126			
Vinyl acetate	34.2	5.00	ug/L	50.0		68.3	60-140			
Surrogate: 1,2-Dichloroethane-d4	*46.4*		ug/L	*50.0*		*92.8*	*70-130*			
Surrogate: Toluene-d8	*50.2*		ug/L	*50.0*		*100*	*70-130*			
Surrogate: Pentafluorobenzene	*51.6*		ug/L	*50.0*		*103*	*70-130*			

Definitions

A5:	Sample was filtered (0.45 um) before analysis.
MCL:	US EPA Maximum Contaminant Level
mg CaCO3/L	Milligrams Calcium Carbonate per Liter
mg/L:	Milligrams per Liter
RL:	Reporting Limit
RPD:	Relative Percent Difference
ug/L:	Micrograms per Liter
Y1:	Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 4.9°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008	Massachusetts Department of Environmental Protection

CERTIFICATE OF ANALYSIS

D1D0987

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Melisa L. Montgomery
Quality Assurance Officer
Reported: 04/20/2021 16:55

MICROBAC

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Tel: (860

Microbac Laboratories, Inc.

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FOR LAB USE ONLY

Lab WO#

Project Manager

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
DELIVERY: ROBERT BLANCHARD
E-MAIL:
PHONE: 508-830-4159 FAX: 508-732-0238

BILL TO: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
PURCHASE ORDER #
ATTENTION: ACCOUNTS PAYABLE
PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP
LOCATION: ID 11773
WELLS - QUARTERLY
ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL
ROBERT SCOTT
PHONE: CELL - 860-204-7988
FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well #A16 (250 mL)	4/8/21	12:27		X	WW	1	X	X											X			
Well #A16 (250 mL)	4/8/21	12:27		X	WW	1			X	X								X				
Well #A16 (250 mL)(filtered)	4/8/21	12:27		X	WW	1					X							X				
Well # A16 (250 mL)	4/8/21	12:27		X	WW	1						X						X				
Well #A16 (250 mL)	4/8/21	12:27		X	WW	1							X					X				
Well #A16 (250 mL)	4/8/21	12:27		X	WW	1								X	X	X					X	
Well #A16 (40 mL vial)	4/8/21	12:27		X	WW	2											X	X				
Well #A16 (40 mL vial)	4/8/21	12:27		X	WW	2											X			X		

PRESERVATIVE VERIFIED initials

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	4/8/21	
RECEIVED:		
RELINQUISHED:		
CEIVED:	4/8/2021	1455
LINQUISHED:	4-8-21	1700
CEIVED:	4-8-21	1700

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE):

COOLED ☐ AMBIENT ☐ COMPLIANT ☐

4.9°C

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1D1520

Project Description

Wells - Quarterly

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Thursday, April 22, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1D1520

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Quarterly

Project / PO Number: 346346
Received: 04/14/2021
Reported: 04/22/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well A11	D1D1520-01	Groundwater	Grab		04/14/21 09:41	04/14/21 17:32
Well A11	D1D1520-02	Groundwater	Grab		04/14/21 09:41	04/14/21 17:32
Well A11 (filtered)	D1D1520-03	Groundwater	Grab		04/14/21 09:41	04/14/21 17:32
Well A11	D1D1520-04	Groundwater	Grab		04/14/21 09:41	04/14/21 17:32
Well A11	D1D1520-05	Groundwater	Grab		04/14/21 09:41	04/14/21 17:32
Well A11	D1D1520-06	Groundwater	Grab		04/14/21 09:41	04/14/21 17:32
Well A11	D1D1520-07	Groundwater	Grab		04/14/21 09:41	04/14/21 17:32
Well A11	D1D1520-08	Groundwater	Grab		04/14/21 09:41	04/14/21 17:32

CERTIFICATE OF ANALYSIS

D1D1520

Analytical Testing Parameters

Client Sample ID: Well A11
Sample Matrix: Groundwater
Lab Sample ID: D1D1520-01
Collected By: Customer
Collection Date: 04/14/2021 9:41

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 351.1								
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L	1		04/16/21 0954	04/19/21 1502	CLW
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0149**	0.0106	mg/L	1		04/15/21 1700	04/16/21 1431	DJM

Client Sample ID: Well A11
Sample Matrix: Groundwater
Lab Sample ID: D1D1520-02
Collected By: Customer
Collection Date: 04/14/2021 9:41

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-NO_3^- F-2011								
Nitrate as N	**0.669**	0.0500	mg/L	1			04/14/21 1918	DJM
Nitrite as N	<0.0100	0.0100	mg/L	1	**Y1**		04/14/21 1918	DJM

Client Sample ID: Well A11 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1D1520-03
Collected By: Customer
Collection Date: 04/14/2021 9:41

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0160**	0.0100	mg/L	1		04/14/21 1809	04/15/21 0006	DJM

Client Sample ID: Well A11
Sample Matrix: Groundwater
Lab Sample ID: D1D1520-04
Collected By: Customer
Collection Date: 04/14/2021 9:41

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 2320 B-2011								
Alkalinity to pH 4.5	**9.00**	1.00	mg CaCO3/L	1		04/19/21 1724	04/19/21 1700	SRF

Client Sample ID: Well A11
Sample Matrix: Groundwater
Lab Sample ID: D1D1520-05
Collected By: Customer
Collection Date: 04/14/2021 9:41

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-Cl E-2011								
Chloride	**143**	8.00	mg/L	4			04/20/21 1656	CLW

CERTIFICATE OF ANALYSIS

D1D1520

Client Sample ID:	Well A11		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D1520-06	**Collection Date:**	04/14/2021 9:41

Metals Total by ICP	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.7, Rv. 4.4 (1994)								
Boron	**0.0192**	0.0050	mg/L	1	**Y1**	04/16/21 1338	04/19/21 1708	JDF
Copper	<0.0020	0.0020	mg/L	1		04/16/21 1338	04/19/21 1708	JDF
Sodium	**73.1**	1.00	mg/L	1		04/16/21 1338	04/19/21 1708	JDF

Client Sample ID:	Well A11		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D1520-07	**Collection Date:**	04/14/2021 9:41

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acrolein	<20.0	20.0	ug/L	1			04/16/21 1313	JAN
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	1			04/16/21 1313	JAN
Surrogate: 1,2-Dichloroethane-d4	99.4	Limit: 70-130	% Rec	1			04/16/21 1313	JAN
Surrogate: Toluene-d8	102	Limit: 70-130	% Rec	1			04/16/21 1313	JAN
Surrogate: Pentafluorobenzene	98.6	Limit: 70-130	% Rec	1			04/16/21 1313	JAN

CERTIFICATE OF ANALYSIS

D1D1520

Client Sample ID:	Well A11		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D1520-08	**Collection Date:**	04/14/2021 9:41

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acetone	<10.0	10.0	ug/L	1	**Y1**		04/20/21 1409	JAN
Acrylonitrile	<20.0	20.0	ug/L	1			04/20/21 1409	JAN
Benzene	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
Bromodichloromethane	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
Bromoform	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
Bromomethane	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
2-Butanone (MEK)	<10.0	10.0	ug/L	1	**Y1**		04/20/21 1409	JAN
Carbon disulfide	<5.00	5.00	ug/L	1	**Y1**		04/20/21 1409	JAN
Carbon tetrachloride	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
Chlorobenzene	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
Chloroform	<4.00	4.00	ug/L	1			04/20/21 1409	JAN
Chloromethane	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
Dibromochloromethane	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L	1	**Y1**		04/20/21 1409	JAN
1,2-Dichlorobenzene	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
1,3-Dichlorobenzene	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
1,4-Dichlorobenzene	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L	1	**Y1**		04/20/21 1409	JAN
1,2-Dichloroethane	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
1,1-Dichloroethane	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
cis-1,2-Dichloroethene	<5.00	5.00	ug/L	1	**Y1**		04/20/21 1409	JAN
1,1-Dichloroethene	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
trans-1,2-Dichloroethene	<4.00	4.00	ug/L	1			04/20/21 1409	JAN
1,2-Dichloropropane	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
cis-1,3-Dichloropropene	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
trans-1,3-Dichloropropene	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
Ethylbenzene	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
2-Hexanone (MBK)	<10.0	10.0	ug/L	1	**Y1**		04/20/21 1409	JAN
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L	1	**Y1**		04/20/21 1409	JAN
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L	1			04/20/21 1409	JAN
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L	1	**Y1**		04/20/21 1409	JAN
Styrene	<5.00	5.00	ug/L	1	**Y1**		04/20/21 1409	JAN
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
Tetrachloroethene	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
Toluene	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
1,1,2-Trichloroethane	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
1,1,1-Trichloroethane	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
Trichloroethene	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
Vinyl chloride	<5.00	5.00	ug/L	1			04/20/21 1409	JAN
m,p-Xylene	<10.0	10.0	ug/L	1	**Y1**		04/20/21 1409	JAN

CERTIFICATE OF ANALYSIS

D1D1520

Client Sample ID:	Well A11		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D1520-08	**Collection Date:**	04/14/2021 9:41

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
o-Xylene	<5.00	5.00	ug/L	1	**Y1**		04/20/21 1409	JAN
Vinyl acetate	<5.00	5.00	ug/L	1	**Y1**		04/20/21 1409	JAN
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 70-130	% Rec	1			04/20/21 1409	JAN
Surrogate: Toluene-d8	103	Limit: 70-130	% Rec	1			04/20/21 1409	JAN
Surrogate: Pentafluorobenzene	100	Limit: 70-130	% Rec	1			04/20/21 1409	JAN

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-NO_3^- F-2011	DD10915	DD10915-DUP1	D1D1450-02
		DD10915-DUP1	D1D1450-02
		DD10915-MS1	D1D1450-02
		DD10915-MS1	D1D1450-02
		DD10915-MSD1	D1D1450-02
		DD10915-MSD1	D1D1450-02
		DD10915-BS1	
		DD10915-BS2	
		DD10915-BLK1	
		DD10915-BLK1	
		D1D1520-02	Well A11
		D1D1520-02	Well A11

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DD10947	DD10947-BS1	
		DD10947-BLK1	
		D1D1520-03	Well A11 (filtered)
		DD10947-DUP1	D1D1520-03
		DD10947-MS1	D1D1520-03

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DD11006	DD11006-BS1	
		DD11006-BLK1	
		DD11006-DUP1	D1D1559-01
		DD11006-MS1	D1D1559-01
		DD11006-MS2	D1D1561-09
		D1D1520-01	Well A11

Method	Batch	Laboratory ID	Client / Source ID
EPA 351.1	DD11064	DD11064-BS1	
		DD11064-BLK1	
		DD11064-DUP1	D1D1470-01
		DD11064-MS1	D1D1470-01
		DD11064-MS2	L1D0317-02
		D1D1520-01	Well A11

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.7, Rv. 4.4 (1994)	DD11069	DD11069-BLK1	
		DD11069-BS1	
		DD11069-DUP1	D1D1616-06
		DD11069-MS1	D1D1502-03

EPA 200.7, Rv. 4.4 (1994)	DD11069	D1D1520-06	Well A11
		D1D1520-06	Well A11
		DD11069-MS2	D1D1502-02

Method	Batch	Laboratory ID	Client / Source ID
SM 2320 B-2011	DD11216	DD11216-BS1	
		DD11216-DUP1	D1D1409-03
		DD11216-BLK1	
		D1D1520-04	Well A11

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-Cl E-2011	DD11234	DD11234-BS1	
		DD11234-MS1	D1D1542-05
		DD11234-MSD1	D1D1542-05
		D1D1520-05	Well A11
		DD11234-BLK1	
		DD11234-DUP1	D1D1542-05

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DD11374	DD11374-BS1	
		DD11374-BLK1	
		D1D1520-07	Well A11
		DD11374-MS1	D1D1520-07
		DD11374-MSD1	D1D1520-07

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DD11387	DD11387-BS1	
		DD11387-BLK1	
		D1D1520-08	Well A11
		DD11387-MS1	D1D1520-08
		DD11387-MSD1	D1D1520-08

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10915 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Blank (DD10915-BLK1)			Prepared & Analyzed: 04/14/2021							
Nitrite as N	<0.0100	0.0100	mg/L							
Nitrate as N	<0.0500	0.0500	mg/L							
LCS (DD10915-BS1)			Prepared & Analyzed: 04/14/2021							
Nitrate as N	5.02	0.0500	mg/L	5.00		100	90-110			
LCS (DD10915-BS2)			Prepared & Analyzed: 04/14/2021							
Nitrite as N	1.00	0.0100	mg/L	1.00		100	90-110			
Duplicate (DD10915-DUP1)	**Source: D1D1450-02**		Prepared & Analyzed: 04/14/2021							

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10915 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Duplicate (DD10915-DUP1)		**Source: D1D1450-02**	Prepared & Analyzed: 04/14/2021							
Nitrite as N	0.124	0.0100	mg/L		0.125			1.12	20	A5
Nitrate as N	<0.0500	0.0500	mg/L		ND				20	A5
Matrix Spike (DD10915-MS1)		**Source: D1D1450-02**	Prepared & Analyzed: 04/14/2021							
Nitrite as N	1.11	0.0100	mg/L	1.00	0.125	98.2	75-125			A5
Nitrate as N	4.98	0.0500	mg/L	5.00	ND	99.6	75-125			A5
Matrix Spike Dup (DD10915-MSD1)		**Source: D1D1450-02**	Prepared & Analyzed: 04/14/2021							
Nitrite as N	1.10	0.0100	mg/L	1.00	0.125	97.6	75-125	0.543	20	A5
Nitrate as N	4.95	0.0500	mg/L	5.00	ND	98.9	75-125	0.733	20	A5
Batch DD10947 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DD10947-BLK1)			Prepared: 04/14/2021 Analyzed: 04/15/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DD10947-BS1)			Prepared: 04/14/2021 Analyzed: 04/15/2021							
Ortho-phosphate as P	1.08	0.0100	mg/L	1.00		108	90-110			
Duplicate (DD10947-DUP1)		**Source: D1D1520-03**	Prepared: 04/14/2021 Analyzed: 04/15/2021							
Ortho-phosphate as P	0.0150	0.0100	mg/L		0.0160			6.45	20	
Matrix Spike (DD10947-MS1)		**Source: D1D1520-03**	Prepared: 04/14/2021 Analyzed: 04/15/2021							
Ortho-phosphate as P	1.02	0.0100	mg/L	1.00	0.0160	101	90-110			
Batch DD11006 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DD11006-BLK1)			Prepared: 04/15/2021 Analyzed: 04/16/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DD11006-BS1)			Prepared: 04/15/2021 Analyzed: 04/16/2021							
Phosphorus - Total as P	0.965	0.0106	mg/L	1.00		96.5	90-110			
Duplicate (DD11006-DUP1)		**Source: D1D1559-01**	Prepared: 04/15/2021 Analyzed: 04/16/2021							
Phosphorus - Total as P	0.199	0.0106	mg/L		0.200			0.533	20	
Matrix Spike (DD11006-MS1)		**Source: D1D1559-01**	Prepared: 04/15/2021 Analyzed: 04/16/2021							
Phosphorus - Total as P	1.44	0.0106	mg/L	1.25	0.200	99.5	90-110			
Matrix Spike (DD11006-MS2)		**Source: D1D1561-09**	Prepared: 04/15/2021 Analyzed: 04/16/2021							
Phosphorus - Total as P	1.26	0.0106	mg/L	1.25	0.0425	97.0	90-110			
Batch DD11064 - Wet-Digestion-W - EPA 351.1										
Blank (DD11064-BLK1)			Prepared: 04/16/2021 Analyzed: 04/19/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L							
LCS (DD11064-BS1)			Prepared: 04/16/2021 Analyzed: 04/19/2021							
Total Kjeldahl Nitrogen (TKN)	4.99	0.200	mg/L	5.00		99.8	90-110			
Duplicate (DD11064-DUP1)		**Source: D1D1470-01**	Prepared: 04/16/2021 Analyzed: 04/19/2021							
Total Kjeldahl Nitrogen (TKN)	0.593	0.200	mg/L		0.582			1.82	20	
Matrix Spike (DD11064-MS1)		**Source: D1D1470-01**	Prepared: 04/16/2021 Analyzed: 04/19/2021							
Total Kjeldahl Nitrogen (TKN)	10.7	0.200	mg/L	10.0	0.582	101	90-110			

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11064 - Wet-Digestion-W - EPA 351.1										
Matrix Spike (DD11064-MS2)		**Source: L1D0317-02**		Prepared: 04/16/2021 Analyzed: 04/19/2021						
Total Kjeldahl Nitrogen (TKN)	10.3	0.200	mg/L	10.0	0.227	101	90-110			
Batch DD11216 - Wet Chem - W - SM 2320 B-2011										
Blank (DD11216-BLK1)				Prepared & Analyzed: 04/19/2021						
Alkalinity to pH 4.5	<1.00	1.00	mg CaCO3/ L							
LCS (DD11216-BS1)				Prepared & Analyzed: 04/19/2021						
Alkalinity to pH 4.5	55.0	1.00	mg CaCO3/ L	50.0		110	90-110			
Duplicate (DD11216-DUP1)		**Source: D1D1409-03**		Prepared & Analyzed: 04/19/2021						
Alkalinity to pH 4.5	153	1.00	mg CaCO3/ L		153			0.00	20	
Batch DD11234 - Wet Chem - W - SM 4500-Cl E-2011										
Blank (DD11234-BLK1)				Prepared & Analyzed: 04/20/2021						
Chloride	<2.00	2.00	mg/L							
LCS (DD11234-BS1)				Prepared & Analyzed: 04/20/2021						
Chloride	19.4	2.00	mg/L	20.0		97.2	90-110			
Duplicate (DD11234-DUP1)		**Source: D1D1542-05**		Prepared & Analyzed: 04/20/2021						
Chloride	11.2	2.00	mg/L		11.3			1.32	20	
Matrix Spike (DD11234-MS1)		**Source: D1D1542-05**		Prepared & Analyzed: 04/20/2021						
Chloride	31.8	2.00	mg/L	20.0	11.3	103	75-125			
Matrix Spike Dup (DD11234-MSD1)		**Source: D1D1542-05**		Prepared & Analyzed: 04/20/2021						
Chloride	32.5	2.00	mg/L	20.0	11.3	106	75-125	1.91	20	

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11069 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DD11069-BLK1)				Prepared: 04/16/2021 Analyzed: 04/19/2021						
Boron	<0.0050	0.0050	mg/L							
Copper	<0.0020	0.0020	mg/L							
Sodium	<1.00	1.00	mg/L							
LCS (DD11069-BS1)				Prepared: 04/16/2021 Analyzed: 04/19/2021						
Boron	0.515	0.0050	mg/L	0.500		103	85-115			
Copper	0.520	0.0020	mg/L	0.500		104	85-115			
Sodium	10.1	1.00	mg/L	10.5		96.5	85-115			
Duplicate (DD11069-DUP1)		**Source: D1D1616-06**		Prepared: 04/16/2021 Analyzed: 04/19/2021						
Boron	0.108	0.0050	mg/L		0.107			0.817	20	
Copper	0.0047	0.0020	mg/L		0.0051			6.78	20	

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11069 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Duplicate (DD11069-DUP1)		**Source: D1D1616-06**		Prepared: 04/16/2021 Analyzed: 04/19/2021						
Sodium	83.4	1.00	mg/L		82.8			0.719	20	
Matrix Spike (DD11069-MS1)		**Source: D1D1502-03**		Prepared: 04/16/2021 Analyzed: 04/19/2021						
Boron	0.522	0.0050	mg/L	0.500	0.0088	103	70-130			
Copper	0.531	0.0020	mg/L	0.500	0.0023	106	70-130			
Sodium	57.6	1.00	mg/L	10.5	46.9	103	70-130			
Matrix Spike (DD11069-MS2)		**Source: D1D1502-02**		Prepared: 04/16/2021 Analyzed: 04/19/2021						
Boron	0.521	0.0050	mg/L	0.500	0.0073	103	70-130			
Copper	0.535	0.0020	mg/L	0.500	0.0022	106	70-130			
Sodium	57.8	1.00	mg/L	10.5	47.0	103	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11374 - 624.1 - EPA 624.1										
Blank (DD11374-BLK1)			Prepared & Analyzed: 04/16/2021							
Acrolein	<20.0	20.0	ug/L							
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*50.6*		ug/L	*50.0*		*101*	*70-130*			
Surrogate: Toluene-d8	*51.8*		ug/L	*50.0*		*104*	*70-130*			
Surrogate: Pentafluorobenzene	*47.2*		ug/L	*50.0*		*94.5*	*70-130*			
LCS (DD11374-BS1)			Prepared & Analyzed: 04/16/2021							
Acrolein	56.9	20.0	ug/L	50.0		114	60-140			
2-Chloroethyl vinyl ether	47.2	20.0	ug/L	50.0		94.5	1-305			
Surrogate: 1,2-Dichloroethane-d4	*50.8*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Toluene-d8	*53.3*		ug/L	*50.0*		*107*	*70-130*			
Surrogate: Pentafluorobenzene	*48.6*		ug/L	*50.0*		*97.3*	*70-130*			
Matrix Spike (DD11374-MS1)		**Source: D1D1520-07**		Prepared & Analyzed: 04/16/2021						
Acrolein	65.8	20.0	ug/L	50.0	ND	132	40-160			
2-Chloroethyl vinyl ether	51.5	20.0	ug/L	50.0	ND	103	1-305			
Surrogate: 1,2-Dichloroethane-d4	*50.7*		ug/L	*50.0*		*101*	*70-130*			
Surrogate: Toluene-d8	*52.5*		ug/L	*50.0*		*105*	*70-130*			
Surrogate: Pentafluorobenzene	*50.8*		ug/L	*50.0*		*102*	*70-130*			
Matrix Spike Dup (DD11374-MSD1)		**Source: D1D1520-07**		Prepared & Analyzed: 04/16/2021						
Acrolein	73.0	20.0	ug/L	50.0	ND	146	40-160	10.4	60	
2-Chloroethyl vinyl ether	52.4	20.0	ug/L	50.0	ND	105	1-305	1.64	71	
Surrogate: 1,2-Dichloroethane-d4	*49.9*		ug/L	*50.0*		*99.8*	*70-130*			
Surrogate: Toluene-d8	*51.8*		ug/L	*50.0*		*104*	*70-130*			
Surrogate: Pentafluorobenzene	*50.1*		ug/L	*50.0*		*100*	*70-130*			
Batch DD11387 - 624.1 - EPA 624.1										
Blank (DD11387-BLK1)			Prepared & Analyzed: 04/20/2021							
Acetone	<10.0	10.0	ug/L							
Acrylonitrile	<20.0	20.0	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11387 - 624.1 - EPA 624.1										
Blank (DD11387-BLK1)			Prepared & Analyzed: 04/20/2021							
Benzene	<5.00	5.00	ug/L							
Bromodichloromethane	<5.00	5.00	ug/L							
Bromoform	<5.00	5.00	ug/L							
Bromomethane	<5.00	5.00	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Carbon disulfide	<5.00	5.00	ug/L							
Carbon tetrachloride	<5.00	5.00	ug/L							
Chlorobenzene	<5.00	5.00	ug/L							
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L							
Chloroform	<4.00	4.00	ug/L							
Chloromethane	<5.00	5.00	ug/L							
Dibromochloromethane	<5.00	5.00	ug/L							
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L							
1,2-Dichlorobenzene	<5.00	5.00	ug/L							
1,3-Dichlorobenzene	<5.00	5.00	ug/L							
1,4-Dichlorobenzene	<5.00	5.00	ug/L							
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L							
1,2-Dichloroethane	<5.00	5.00	ug/L							
1,1-Dichloroethane	<5.00	5.00	ug/L							
cis-1,2-Dichloroethene	<5.00	5.00	ug/L							
1,1-Dichloroethene	<5.00	5.00	ug/L							
trans-1,2-Dichloroethene	<4.00	4.00	ug/L							
1,2-Dichloropropane	<5.00	5.00	ug/L							
cis-1,3-Dichloropropene	<5.00	5.00	ug/L							
trans-1,3-Dichloropropene	<5.00	5.00	ug/L							
Ethylbenzene	<5.00	5.00	ug/L							
2-Hexanone (MBK)	<10.0	10.0	ug/L							
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L							
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L							
Styrene	<5.00	5.00	ug/L							
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L							
Tetrachloroethene	<5.00	5.00	ug/L							
Toluene	<5.00	5.00	ug/L							
1,1,2-Trichloroethane	<5.00	5.00	ug/L							
1,1,1-Trichloroethane	<5.00	5.00	ug/L							
Trichloroethene	<5.00	5.00	ug/L							
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L							
Vinyl chloride	<5.00	5.00	ug/L							
m,p-Xylene	<10.0	10.0	ug/L							
o-Xylene	<5.00	5.00	ug/L							
Vinyl acetate	<5.00	5.00	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11387 - 624.1 - EPA 624.1										
Blank (DD11387-BLK1)				Prepared & Analyzed: 04/20/2021						
Surrogate: 1,2-Dichloroethane-d4	*51.9*		ug/L	*50.0*		*104*	*70-130*			
Surrogate: Toluene-d8	*53.9*		ug/L	*50.0*		*108*	*70-130*			
LCS (DD11387-BS1)				Prepared & Analyzed: 04/20/2021						
Acetone	37.3	10.0	ug/L	50.0		74.7	42.1-136			
Acrylonitrile	46.6	20.0	ug/L	50.0		93.2	60-140			
Benzene	48.5	5.00	ug/L	50.0		96.9	65-135			
Bromodichloromethane	49.9	5.00	ug/L	50.0		99.8	65-135			
Bromoform	50.5	5.00	ug/L	50.0		101	70-130			
Bromomethane	50.4	5.00	ug/L	50.0		101	15-185			
2-Butanone (MEK)	45.9	10.0	ug/L	50.0		91.8	63.1-143			
Carbon disulfide	34.0	5.00	ug/L	50.0		68.0	63.5-124			
Carbon tetrachloride	48.8	5.00	ug/L	50.0		97.5	70-130			
Chlorobenzene	47.4	5.00	ug/L	50.0		94.9	65-135			
Chloroethane (Ethyl chloride)	70.8	5.00	ug/L	50.0		142	40-160			
Chloroform	47.1	4.00	ug/L	50.0		94.3	70-135			
Chloromethane	44.8	5.00	ug/L	50.0		89.6	1-205			
Dibromochloromethane	51.4	5.00	ug/L	50.0		103	70-135			
Dibromomethane (Methylene bromide)	48.0	5.00	ug/L	50.0		96.1	73.8-124			
1,2-Dichlorobenzene	47.8	5.00	ug/L	50.0		95.6	65-135			
1,3-Dichlorobenzene	47.4	5.00	ug/L	50.0		94.9	70-130			
1,4-Dichlorobenzene	48.0	5.00	ug/L	50.0		96.1	65-135			
Dichlorodifluoromethane (Freon-12)	45.1	5.00	ug/L	50.0		90.3	34.7-129			
1,2-Dichloroethane	48.0	5.00	ug/L	50.0		96.0	70-130			
1,1-Dichloroethane	46.8	5.00	ug/L	50.0		93.6	70-130			
cis-1,2-Dichloroethene	44.7	5.00	ug/L	50.0		89.5	75.5-125			
1,1-Dichloroethene	48.1	5.00	ug/L	50.0		96.3	50-150			
trans-1,2-Dichloroethene	51.2	4.00	ug/L	50.0		102	70-130			
1,2-Dichloropropane	50.4	5.00	ug/L	50.0		101	35-165			
cis-1,3-Dichloropropene	49.5	5.00	ug/L	50.0		99.0	25-175			
trans-1,3-Dichloropropene	47.7	5.00	ug/L	50.0		95.4	50-150			
Ethylbenzene	48.0	5.00	ug/L	50.0		95.9	60-140			
2-Hexanone (MBK)	47.4	10.0	ug/L	50.0		94.8	73.6-130			
Methyl tert-butyl ether (MTBE)	46.4	5.00	ug/L	50.0		92.8	69-151			
Methylene chloride (Dichloromethane)	47.0	1.00	ug/L	50.0		93.9	60-140			
4-Methyl-2-pentanone (MIBK)	46.7	10.0	ug/L	50.0		93.4	72.5-129			
Styrene	51.8	5.00	ug/L	50.0		104	79.2-127			
1,1,2,2-Tetrachloroethane	50.6	5.00	ug/L	50.0		101	60-140			
Tetrachloroethene	48.8	5.00	ug/L	50.0		97.6	70-130			
Toluene	48.5	5.00	ug/L	50.0		96.9	70-130			
1,1,2-Trichloroethane	48.9	5.00	ug/L	50.0		97.8	70-130			
1,1,1-Trichloroethane	47.9	5.00	ug/L	50.0		95.7	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11387 - 624.1 - EPA 624.1										
LCS (DD11387-BS1)				Prepared & Analyzed: 04/20/2021						
Trichloroethene	50.1	5.00	ug/L	50.0		100	65-135			
Trichlorofluoromethane (Freon 11)	27.6	5.00	ug/L	50.0		55.2	50-150			
Vinyl chloride	46.9	5.00	ug/L	50.0		93.9	5-195			
m,p-Xylene	109	10.0	ug/L	100		109	77.1-129			
o-Xylene	50.3	5.00	ug/L	50.0		101	78.8-126			
Vinyl acetate	51.3	5.00	ug/L	50.0		103	60-140			
Surrogate: 1,2-Dichloroethane-d4	*48.9*		ug/L	*50.0*		*97.8*	*70-130*			
Surrogate: Toluene-d8	*49.6*		ug/L	*50.0*		*99.2*	*70-130*			
Surrogate: Pentafluorobenzene	*52.5*		ug/L	*50.0*		*105*	*70-130*			
Matrix Spike (DD11387-MS1)	**Source: D1D1520-08**			Prepared & Analyzed: 04/20/2021						
Acetone	32.2	10.0	ug/L	50.0	6.29	51.8	0-200			
Acrylonitrile	39.8	20.0	ug/L	50.0	ND	79.7	40-160			
Benzene	46.0	5.00	ug/L	50.0	ND	91.9	37-151			
Bromodichloromethane	45.7	5.00	ug/L	50.0	ND	91.5	35-155			
Bromoform	44.7	5.00	ug/L	50.0	ND	89.4	45-169			
Bromomethane	54.1	5.00	ug/L	50.0	ND	108	1-242			
2-Butanone (MEK)	39.2	10.0	ug/L	50.0	ND	78.4	0-200			
Carbon disulfide	33.1	5.00	ug/L	50.0	ND	66.2	0-200			
Carbon tetrachloride	50.1	5.00	ug/L	50.0	ND	100	70-140			
Chlorobenzene	44.7	5.00	ug/L	50.0	ND	89.5	37-160			
Chloroethane (Ethyl chloride)	82.5	5.00	ug/L	50.0	ND	165	14-230			
Chloroform	45.3	4.00	ug/L	50.0	ND	90.6	51-138			
Chloromethane	45.6	5.00	ug/L	50.0	ND	91.2	1-273			
Dibromochloromethane	45.5	5.00	ug/L	50.0	ND	91.0	53-149			
Dibromomethane (Methylene bromide)	45.9	5.00	ug/L	50.0	ND	91.9	0-200			
1,2-Dichlorobenzene	43.0	5.00	ug/L	50.0	ND	86.0	18-190			
1,3-Dichlorobenzene	44.1	5.00	ug/L	50.0	ND	88.2	59-156			
1,4-Dichlorobenzene	42.9	5.00	ug/L	50.0	ND	85.7	18-190			
Dichlorodifluoromethane (Freon-12)	45.1	5.00	ug/L	50.0	ND	90.3	0-200			
1,2-Dichloroethane	45.7	5.00	ug/L	50.0	ND	91.4	49-155			
1,1-Dichloroethane	44.7	5.00	ug/L	50.0	ND	89.4	59-155			
cis-1,2-Dichloroethene	42.5	5.00	ug/L	50.0	ND	84.9	0-200			
1,1-Dichloroethene	47.5	5.00	ug/L	50.0	ND	95.0	1-234			
trans-1,2-Dichloroethene	48.8	4.00	ug/L	50.0	ND	97.6	54-156			
1,2-Dichloropropane	46.8	5.00	ug/L	50.0	ND	93.7	1-210			
cis-1,3-Dichloropropene	43.8	5.00	ug/L	50.0	ND	87.7	1-227			
trans-1,3-Dichloropropene	43.1	5.00	ug/L	50.0	ND	86.2	17-183			
Ethylbenzene	45.8	5.00	ug/L	50.0	ND	91.5	37-162			
2-Hexanone (MBK)	40.0	10.0	ug/L	50.0	ND	80.1	0-200			
Methyl tert-butyl ether (MTBE)	41.9	5.00	ug/L	50.0	ND	83.9	0-200			
Methylene chloride (Dichloromethane)	44.7	1.00	ug/L	50.0	ND	89.4	1-221			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11387 - 624.1 - EPA 624.1										
Matrix Spike (DD11387-MS1)	**Source: D1D1520-08**		Prepared & Analyzed: 04/20/2021							
4-Methyl-2-pentanone (MIBK)	40.1	10.0	ug/L	50.0	ND	80.2	0-200			
Styrene	48.8	5.00	ug/L	50.0	ND	97.5	0-200			
1,1,2,2-Tetrachloroethane	44.6	5.00	ug/L	50.0	ND	89.2	46-157			
Tetrachloroethene	45.3	5.00	ug/L	50.0	ND	90.6	64-148			
Toluene	46.2	5.00	ug/L	50.0	ND	92.4	47-150			
1,1,2-Trichloroethane	42.7	5.00	ug/L	50.0	ND	85.4	52-150			
1,1,1-Trichloroethane	47.9	5.00	ug/L	50.0	ND	95.8	52-162			
Trichloroethene	48.4	5.00	ug/L	50.0	ND	96.8	70-157			
Trichlorofluoromethane (Freon 11)	20.6	5.00	ug/L	50.0	ND	41.2	17-181			
Vinyl chloride	47.8	5.00	ug/L	50.0	ND	95.6	1-251			
m,p-Xylene	102	10.0	ug/L	100	ND	102	0-200			
o-Xylene	46.2	5.00	ug/L	50.0	ND	92.5	0-200			
Vinyl acetate	46.1	5.00	ug/L	50.0	ND	92.1	60-140			
Surrogate: 1,2-Dichloroethane-d4	*49.8*		ug/L	*50.0*		*99.7*	*70-130*			
Surrogate: Toluene-d8	*49.1*		ug/L	*50.0*		*98.2*	*70-130*			
Surrogate: Pentafluorobenzene	*51.6*		ug/L	*50.0*		*103*	*70-130*			
Matrix Spike Dup (DD11387-MSD1)	**Source: D1D1520-08**		Prepared & Analyzed: 04/20/2021							
Acetone	32.8	10.0	ug/L	50.0	6.29	53.1	0-200	2.03	200	
Acrylonitrile	41.3	20.0	ug/L	50.0	ND	82.6	40-160	3.65	60	
Benzene	43.9	5.00	ug/L	50.0	ND	87.8	37-151	4.61	61	
Bromodichloromethane	45.4	5.00	ug/L	50.0	ND	90.9	35-155	0.658	56	
Bromoform	45.9	5.00	ug/L	50.0	ND	91.8	45-169	2.56	42	
Bromomethane	51.5	5.00	ug/L	50.0	ND	103	1-242	4.91	61	
2-Butanone (MEK)	38.8	10.0	ug/L	50.0	ND	77.6	0-200	1.13	200	
Carbon disulfide	31.6	5.00	ug/L	50.0	ND	63.3	0-200	4.54	200	
Carbon tetrachloride	47.0	5.00	ug/L	50.0	ND	94.1	70-140	6.32	41	
Chlorobenzene	44.1	5.00	ug/L	50.0	ND	88.3	37-160	1.37	53	
Chloroethane (Ethyl chloride)	76.4	5.00	ug/L	50.0	ND	153	14-230	7.64	78	
Chloroform	44.7	4.00	ug/L	50.0	ND	89.4	51-138	1.42	54	
Chloromethane	43.6	5.00	ug/L	50.0	ND	87.1	1-273	4.58	60	
Dibromochloromethane	45.7	5.00	ug/L	50.0	ND	91.3	53-149	0.329	50	
Dibromomethane (Methylene bromide)	45.4	5.00	ug/L	50.0	ND	90.7	0-200	1.25	200	
1,2-Dichlorobenzene	42.2	5.00	ug/L	50.0	ND	84.5	18-190	1.76	57	
1,3-Dichlorobenzene	42.6	5.00	ug/L	50.0	ND	85.1	59-156	3.51	43	
1,4-Dichlorobenzene	43.1	5.00	ug/L	50.0	ND	86.2	18-190	0.512	57	
Dichlorodifluoromethane (Freon-12)	45.2	5.00	ug/L	50.0	ND	90.4	0-200	0.177	200	
1,2-Dichloroethane	43.4	5.00	ug/L	50.0	ND	86.7	49-155	5.30	49	
1,1-Dichloroethane	42.9	5.00	ug/L	50.0	ND	85.8	59-155	4.04	40	
cis-1,2-Dichloroethene	40.1	5.00	ug/L	50.0	ND	80.2	0-200	5.72	200	
1,1-Dichloroethene	47.4	5.00	ug/L	50.0	ND	94.7	1-234	0.337	32	
trans-1,2-Dichloroethene	48.3	4.00	ug/L	50.0	ND	96.6	54-156	1.03	45	
1,2-Dichloropropane	46.2	5.00	ug/L	50.0	ND	92.3	1-210	1.46	55	

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11387 - 624.1 - EPA 624.1										
Matrix Spike Dup (DD11387-MSD1)	**Source: D1D1520-08**		Prepared & Analyzed: 04/20/2021							
cis-1,3-Dichloropropene	44.4	5.00	ug/L	50.0	ND	88.7	1-227	1.18	58	
trans-1,3-Dichloropropene	42.0	5.00	ug/L	50.0	ND	84.0	17-183	2.68	86	
Ethylbenzene	44.0	5.00	ug/L	50.0	ND	87.9	37-162	4.03	63	
2-Hexanone (MBK)	40.4	10.0	ug/L	50.0	ND	80.7	0-200	0.821	200	
Methyl tert-butyl ether (MTBE)	42.2	5.00	ug/L	50.0	ND	84.4	0-200	0.665	200	
Methylene chloride (Dichloromethane)	43.9	1.00	ug/L	50.0	ND	87.8	1-221	1.78	28	
4-Methyl-2-pentanone (MIBK)	41.4	10.0	ug/L	50.0	ND	82.7	0-200	3.12	200	
Styrene	47.8	5.00	ug/L	50.0	ND	95.5	0-200	2.09	200	
1,1,2,2-Tetrachloroethane	46.1	5.00	ug/L	50.0	ND	92.2	46-157	3.40	61	
Tetrachloroethene	43.8	5.00	ug/L	50.0	ND	87.7	64-148	3.32	39	
Toluene	44.1	5.00	ug/L	50.0	ND	88.2	47-150	4.70	41	
1,1,2-Trichloroethane	44.1	5.00	ug/L	50.0	ND	88.2	52-150	3.18	45	
1,1,1-Trichloroethane	46.4	5.00	ug/L	50.0	ND	92.7	52-162	3.23	36	
Trichloroethene	45.0	5.00	ug/L	50.0	ND	90.0	70-157	7.26	48	
Trichlorofluoromethane (Freon 11)	20.1	5.00	ug/L	50.0	ND	40.2	17-181	2.36	84	
Vinyl chloride	47.5	5.00	ug/L	50.0	ND	94.9	1-251	0.693	66	
m,p-Xylene	99.5	10.0	ug/L	100	ND	99.5	0-200	2.91	200	
o-Xylene	45.9	5.00	ug/L	50.0	ND	91.7	0-200	0.847	200	
Vinyl acetate	45.7	5.00	ug/L	50.0	ND	91.5	60-140	0.719	25	
Surrogate: 1,2-Dichloroethane-d4	*48.7*		ug/L	*50.0*		*97.5*	*70-130*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.0*		*98.8*	*70-130*			
Surrogate: Pentafluorobenzene	*51.4*		ug/L	*50.0*		*103*	*70-130*			

Definitions

A5:	Sample was filtered (0.45 um) before analysis.
MCL:	US EPA Maximum Contaminant Level
mg CaCO3/L	Milligrams Calcium Carbonate per Liter
mg/L:	Milligrams per Liter
RL:	Reporting Limit
RPD:	Relative Percent Difference
ug/L:	Micrograms per Liter
Y1:	Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 2.4°C

CERTIFICATE OF ANALYSIS

D1D1520

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008	Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Melisa L. Montgomery
Quality Assurance Officer
Reported: 04/22/2021 15:07

MICROBAC

D1D1520

W & C - Plymouth

Microbac Laboratories, Inc.

FOR LAB USE ONLY

Lab WO#

Project Manager

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

DELIVERY: ROBERT BLANCHARD

E-MAIL: [redacted]

PHONE: 508-830-4159 FAX: 508-732-0238

BILL TO: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

PURCHASE ORDER #

ATTENTION: ACCOUNTS PAYABLE

PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP

LOCATION: ID 11773

WELLS - QUARTERLY

ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL

ROBERT SCOTT

PHONE: CELL - 860-204-7988

FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # A11 (250 mL)	4/14/21	9:41		X	WW	1	X	X											X			
Well # A11 (250 mL)	4/14/21	9:42		X	WW	1			X	X								X				
Well # A11 (250 mL)(filtered)	4/14/21	9:42		X	WW	1					X							X				
Well # A11 (250 mL)	4/14/21	9:43		X	WW	1						X						X				
Well # A11 (250 mL)	4/14/21	9:42		X	WW	1							X					X				
Well # A11 (250 mL)	4/14/21	9:42		X	WW	1								X	X	X					X	
Well A11	4/14/21	9:42		X	WW	2											X	X				
Well A11	4/14/21	9:43		X	WW	2						PRELIM VERIFIED Initials					X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	4/14/21	9:41
RECEIVED:		
RELINQUISHED:	4/14/21	15:42
RECEIVED:	4/14/21	15:42
RELINQUISHED:	4/14/21	17:32
RECEIVED:	4/14/21	1732

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☐ AMBIENT ☐

2.4°C

Page 18 of 18

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1D1542

Project Description

Wells - Quarterly

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Thursday, April 22, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

MICROBAC®

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1D1542

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Quarterly

Project / PO Number: 346346
Received: 04/14/2021
Reported: 04/22/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well 1S	D1D1542-01	Groundwater	Grab		04/14/21 10:34	04/14/21 17:32
Well 1S	D1D1542-02	Groundwater	Grab		04/14/21 10:34	04/14/21 17:32
Well 1S (filtered)	D1D1542-03	Groundwater	Grab		04/14/21 10:34	04/14/21 17:32
Well 1S	D1D1542-04	Groundwater	Grab		04/14/21 10:34	04/14/21 17:32
Well 1S	D1D1542-05	Groundwater	Grab		04/14/21 10:34	04/14/21 17:32
Well 1S	D1D1542-06	Groundwater	Grab		04/14/21 10:34	04/14/21 17:32
Well 1S	D1D1542-07	Groundwater	Grab		04/14/21 10:34	04/14/21 17:32
Well 1S	D1D1542-08	Groundwater	Grab		04/14/21 10:34	04/14/21 17:32

CERTIFICATE OF ANALYSIS

D1D1542

Analytical Testing Parameters

Client Sample ID: Well 1S
Sample Matrix: Groundwater
Lab Sample ID: D1D1542-01
Collected By: Customer
Collection Date: 04/14/2021 10:34

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 351.1								
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L	1		04/16/21 0954	04/19/21 1503	CLW
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0128**	0.0106	mg/L	1		04/15/21 1700	04/16/21 1432	DJM

Client Sample ID: Well 1S
Sample Matrix: Groundwater
Lab Sample ID: D1D1542-02
Collected By: Customer
Collection Date: 04/14/2021 10:34

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-NO_3^- F-2011								
Nitrate as N	**0.0559**	0.0500	mg/L	1			04/14/21 2001	DJM
Nitrite as N	<0.0100	0.0100	mg/L	1	**Y1**		04/14/21 2001	DJM

Client Sample ID: Well 1S (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1D1542-03
Collected By: Customer
Collection Date: 04/14/2021 10:34

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0160**	0.0100	mg/L	1		04/14/21 1809	04/15/21 0009	DJM

Client Sample ID: Well 1S
Sample Matrix: Groundwater
Lab Sample ID: D1D1542-04
Collected By: Customer
Collection Date: 04/14/2021 10:34

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 2320 B-2011								
Alkalinity to pH 4.5	**2.00**	1.00	mg CaCO3/L	1		04/19/21 1724	04/19/21 1700	SRF

Client Sample ID: Well 1S
Sample Matrix: Groundwater
Lab Sample ID: D1D1542-05
Collected By: Customer
Collection Date: 04/14/2021 10:34

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-Cl E-2011								
Chloride	**11.3**	2.00	mg/L	1			04/20/21 1635	CLW

CERTIFICATE OF ANALYSIS

D1D1542

Client Sample ID:	Well 1S		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D1542-06	**Collection Date:**	04/14/2021 10:34

Metals Total by ICP	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.7, Rv. 4.4 (1994)								
Boron	**0.0082**	0.0050	mg/L	1	**Y1**	04/16/21 1338	04/19/21 1711	JDF
Copper	<0.0020	0.0020	mg/L	1		04/16/21 1338	04/19/21 1711	JDF
Sodium	**8.09**	1.00	mg/L	1		04/16/21 1338	04/19/21 1711	JDF

Client Sample ID:	Well 1S		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D1542-07	**Collection Date:**	04/14/2021 10:34

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acrolein	<20.0	20.0	ug/L	1			04/16/21 1338	JAN
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	1			04/16/21 1338	JAN
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 70-130	% Rec	1			04/16/21 1338	JAN
Surrogate: Toluene-d8	104	Limit: 70-130	% Rec	1			04/16/21 1338	JAN
Surrogate: Pentafluorobenzene	101	Limit: 70-130	% Rec	1			04/16/21 1338	JAN

CERTIFICATE OF ANALYSIS

D1D1542

Client Sample ID:	Well 1S		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D1542-08	**Collection Date:**	04/14/2021 10:34

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acetone	<10.0	10.0	ug/L	1	**Y1**		04/20/21 1435	JAN
Acrylonitrile	<20.0	20.0	ug/L	1			04/20/21 1435	JAN
Benzene	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
Bromodichloromethane	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
Bromoform	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
Bromomethane	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
2-Butanone (MEK)	<10.0	10.0	ug/L	1	**Y1**		04/20/21 1435	JAN
Carbon disulfide	<5.00	5.00	ug/L	1	**Y1**		04/20/21 1435	JAN
Carbon tetrachloride	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
Chlorobenzene	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
Chloroform	<4.00	4.00	ug/L	1			04/20/21 1435	JAN
Chloromethane	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
Dibromochloromethane	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L	1	**Y1**		04/20/21 1435	JAN
1,2-Dichlorobenzene	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
1,3-Dichlorobenzene	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
1,4-Dichlorobenzene	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L	1	**Y1**		04/20/21 1435	JAN
1,2-Dichloroethane	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
1,1-Dichloroethane	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
cis-1,2-Dichloroethene	<5.00	5.00	ug/L	1	**Y1**		04/20/21 1435	JAN
1,1-Dichloroethene	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
trans-1,2-Dichloroethene	<4.00	4.00	ug/L	1			04/20/21 1435	JAN
1,2-Dichloropropane	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
cis-1,3-Dichloropropene	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
trans-1,3-Dichloropropene	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
Ethylbenzene	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
2-Hexanone (MBK)	<10.0	10.0	ug/L	1	**Y1**		04/20/21 1435	JAN
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L	1	**Y1**		04/20/21 1435	JAN
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L	1			04/20/21 1435	JAN
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L	1	**Y1**		04/20/21 1435	JAN
Styrene	<5.00	5.00	ug/L	1	**Y1**		04/20/21 1435	JAN
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
Tetrachloroethene	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
Toluene	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
1,1,2-Trichloroethane	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
1,1,1-Trichloroethane	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
Trichloroethene	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
Vinyl chloride	<5.00	5.00	ug/L	1			04/20/21 1435	JAN
m,p-Xylene	<10.0	10.0	ug/L	1	**Y1**		04/20/21 1435	JAN

CERTIFICATE OF ANALYSIS

D1D1542

Client Sample ID:	Well 1S		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D1542-08	**Collection Date:**	04/14/2021 10:34

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
o-Xylene	<5.00	5.00	ug/L	1	**Y1**		04/20/21 1435	JAN
Vinyl acetate	<5.00	5.00	ug/L	1	**Y1**		04/20/21 1435	JAN
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 70-130	% Rec	1			04/20/21 1435	JAN
Surrogate: Toluene-d8	105	Limit: 70-130	% Rec	1			04/20/21 1435	JAN
Surrogate: Pentafluorobenzene	101	Limit: 70-130	% Rec	1			04/20/21 1435	JAN

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-$NO3^-$ F-2011	DD10915	DD10915-DUP1	D1D1450-02
		DD10915-DUP1	D1D1450-02
		DD10915-MS1	D1D1450-02
		DD10915-MS1	D1D1450-02
		DD10915-MSD1	D1D1450-02
		DD10915-MSD1	D1D1450-02
		DD10915-BS1	
		DD10915-BS2	
		DD10915-BLK1	
		DD10915-BLK1	
		D1D1542-02	Well 1S
		D1D1542-02	Well 1S

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DD10947	DD10947-BS1	
		DD10947-BLK1	
		DD10947-DUP1	D1D1520-03
		DD10947-MS1	D1D1520-03
		D1D1542-03	Well 1S (filtered)

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DD11006	DD11006-BS1	
		DD11006-BLK1	
		DD11006-DUP1	D1D1559-01
		DD11006-MS1	D1D1559-01
		DD11006-MS2	D1D1561-09
		D1D1542-01	Well 1S

Method	Batch	Laboratory ID	Client / Source ID
EPA 351.1	DD11064	DD11064-BS1	
		DD11064-BLK1	
		DD11064-DUP1	D1D1470-01
		DD11064-MS1	D1D1470-01
		DD11064-MS2	L1D0317-02
		D1D1542-01	Well 1S

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.7, Rv. 4.4 (1994)	DD11069	DD11069-BLK1	
		DD11069-BS1	
		DD11069-DUP1	D1D1616-06
		DD11069-MS1	D1D1502-03

EPA 200.7, Rv. 4.4 (1994)	DD11069	D1D1542-06	Well 1S
		D1D1542-06	Well 1S
		DD11069-MS2	D1D1502-02

Method	Batch	Laboratory ID	Client / Source ID
SM 2320 B-2011	DD11216	DD11216-BS1	
		DD11216-DUP1	D1D1409-03
		DD11216-BLK1	
		D1D1542-04	Well 1S

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-Cl E-2011	DD11234	DD11234-BS1	
		D1D1542-05	Well 1S
		DD11234-MS1	D1D1542-05
		DD11234-MSD1	D1D1542-05
		DD11234-BLK1	
		DD11234-DUP1	D1D1542-05

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DD11374	DD11374-BS1	
		DD11374-BLK1	
		D1D1542-07	Well 1S
		DD11374-MS1	D1D1520-07
		DD11374-MSD1	D1D1520-07

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DD11387	DD11387-BS1	
		DD11387-BLK1	
		D1D1542-08	Well 1S
		DD11387-MS1	D1D1520-08
		DD11387-MSD1	D1D1520-08

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10915 - Wet Chem - W - SM 4500-NO_3^- F-2011										
Blank (DD10915-BLK1)			Prepared & Analyzed: 04/14/2021							
Nitrite as N	<0.0100	0.0100	mg/L							
Nitrate as N	<0.0500	0.0500	mg/L							
LCS (DD10915-BS1)			Prepared & Analyzed: 04/14/2021							
Nitrate as N	5.02	0.0500	mg/L	5.00		100	90-110			
LCS (DD10915-BS2)			Prepared & Analyzed: 04/14/2021							
Nitrite as N	1.00	0.0100	mg/L	1.00		100	90-110			
Duplicate (DD10915-DUP1)	**Source: D1D1450-02**		Prepared & Analyzed: 04/14/2021							

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD10915 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Duplicate (DD10915-DUP1)		**Source: D1D1450-02**	Prepared & Analyzed: 04/14/2021							
Nitrite as N	0.124	0.0100	mg/L		0.125			1.12	20	A5
Nitrate as N	<0.0500	0.0500	mg/L		ND				20	A5
Matrix Spike (DD10915-MS1)		**Source: D1D1450-02**	Prepared & Analyzed: 04/14/2021							
Nitrite as N	1.11	0.0100	mg/L	1.00	0.125	98.2	75-125			A5
Nitrate as N	4.98	0.0500	mg/L	5.00	ND	99.6	75-125			A5
Matrix Spike Dup (DD10915-MSD1)		**Source: D1D1450-02**	Prepared & Analyzed: 04/14/2021							
Nitrite as N	1.10	0.0100	mg/L	1.00	0.125	97.6	75-125	0.543	20	A5
Nitrate as N	4.95	0.0500	mg/L	5.00	ND	98.9	75-125	0.733	20	A5
Batch DD10947 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DD10947-BLK1)			Prepared: 04/14/2021 Analyzed: 04/15/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DD10947-BS1)			Prepared: 04/14/2021 Analyzed: 04/15/2021							
Ortho-phosphate as P	1.08	0.0100	mg/L	1.00		108	90-110			
Duplicate (DD10947-DUP1)		**Source: D1D1520-03**	Prepared: 04/14/2021 Analyzed: 04/15/2021							
Ortho-phosphate as P	0.0150	0.0100	mg/L		0.0160			6.45	20	
Matrix Spike (DD10947-MS1)		**Source: D1D1520-03**	Prepared: 04/14/2021 Analyzed: 04/15/2021							
Ortho-phosphate as P	1.02	0.0100	mg/L	1.00	0.0160	101	90-110			
Batch DD11006 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DD11006-BLK1)			Prepared: 04/15/2021 Analyzed: 04/16/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DD11006-BS1)			Prepared: 04/15/2021 Analyzed: 04/16/2021							
Phosphorus - Total as P	0.965	0.0106	mg/L	1.00		96.5	90-110			
Duplicate (DD11006-DUP1)		**Source: D1D1559-01**	Prepared: 04/15/2021 Analyzed: 04/16/2021							
Phosphorus - Total as P	0.199	0.0106	mg/L		0.200			0.533	20	
Matrix Spike (DD11006-MS1)		**Source: D1D1559-01**	Prepared: 04/15/2021 Analyzed: 04/16/2021							
Phosphorus - Total as P	1.44	0.0106	mg/L	1.25	0.200	99.5	90-110			
Matrix Spike (DD11006-MS2)		**Source: D1D1561-09**	Prepared: 04/15/2021 Analyzed: 04/16/2021							
Phosphorus - Total as P	1.26	0.0106	mg/L	1.25	0.0425	97.0	90-110			
Batch DD11064 - Wet-Digestion-W - EPA 351.1										
Blank (DD11064-BLK1)			Prepared: 04/16/2021 Analyzed: 04/19/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L							
LCS (DD11064-BS1)			Prepared: 04/16/2021 Analyzed: 04/19/2021							
Total Kjeldahl Nitrogen (TKN)	4.99	0.200	mg/L	5.00		99.8	90-110			
Duplicate (DD11064-DUP1)		**Source: D1D1470-01**	Prepared: 04/16/2021 Analyzed: 04/19/2021							
Total Kjeldahl Nitrogen (TKN)	0.593	0.200	mg/L		0.582			1.82	20	
Matrix Spike (DD11064-MS1)		**Source: D1D1470-01**	Prepared: 04/16/2021 Analyzed: 04/19/2021							
Total Kjeldahl Nitrogen (TKN)	10.7	0.200	mg/L	10.0	0.582	101	90-110			

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11064 - Wet-Digestion-W - EPA 351.1										
Matrix Spike (DD11064-MS2)		**Source: L1D0317-02**		Prepared: 04/16/2021 Analyzed: 04/19/2021						
Total Kjeldahl Nitrogen (TKN)	10.3	0.200	mg/L	10.0	0.227	101	90-110			
Batch DD11216 - Wet Chem - W - SM 2320 B-2011										
Blank (DD11216-BLK1)				Prepared & Analyzed: 04/19/2021						
Alkalinity to pH 4.5	<1.00	1.00	mg CaCO3/ L							
LCS (DD11216-BS1)				Prepared & Analyzed: 04/19/2021						
Alkalinity to pH 4.5	55.0	1.00	mg CaCO3/ L	50.0		110	90-110			
Duplicate (DD11216-DUP1)		**Source: D1D1409-03**		Prepared & Analyzed: 04/19/2021						
Alkalinity to pH 4.5	153	1.00	mg CaCO3/ L		153			0.00	20	
Batch DD11234 - Wet Chem - W - SM 4500-Cl E-2011										
Blank (DD11234-BLK1)				Prepared & Analyzed: 04/20/2021						
Chloride	<2.00	2.00	mg/L							
LCS (DD11234-BS1)				Prepared & Analyzed: 04/20/2021						
Chloride	19.4	2.00	mg/L	20.0		97.2	90-110			
Duplicate (DD11234-DUP1)		**Source: D1D1542-05**		Prepared & Analyzed: 04/20/2021						
Chloride	11.2	2.00	mg/L		11.3			1.32	20	
Matrix Spike (DD11234-MS1)		**Source: D1D1542-05**		Prepared & Analyzed: 04/20/2021						
Chloride	31.8	2.00	mg/L	20.0	11.3	103	75-125			
Matrix Spike Dup (DD11234-MSD1)		**Source: D1D1542-05**		Prepared & Analyzed: 04/20/2021						
Chloride	32.5	2.00	mg/L	20.0	11.3	106	75-125	1.91	20	

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11069 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DD11069-BLK1)				Prepared: 04/16/2021 Analyzed: 04/19/2021						
Boron	<0.0050	0.0050	mg/L							
Copper	<0.0020	0.0020	mg/L							
Sodium	<1.00	1.00	mg/L							
LCS (DD11069-BS1)				Prepared: 04/16/2021 Analyzed: 04/19/2021						
Boron	0.515	0.0050	mg/L	0.500		103	85-115			
Copper	0.520	0.0020	mg/L	0.500		104	85-115			
Sodium	10.1	1.00	mg/L	10.5		96.5	85-115			
Duplicate (DD11069-DUP1)		**Source: D1D1616-06**		Prepared: 04/16/2021 Analyzed: 04/19/2021						
Boron	0.108	0.0050	mg/L		0.107			0.817	20	
Copper	0.0047	0.0020	mg/L		0.0051			6.78	20	

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11069 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Duplicate (DD11069-DUP1)		**Source: D1D1616-06**		Prepared: 04/16/2021 Analyzed: 04/19/2021						
Sodium	83.4	1.00	mg/L		82.8			0.719	20	
Matrix Spike (DD11069-MS1)		**Source: D1D1502-03**		Prepared: 04/16/2021 Analyzed: 04/19/2021						
Boron	0.522	0.0050	mg/L	0.500	0.0088	103	70-130			
Copper	0.531	0.0020	mg/L	0.500	0.0023	106	70-130			
Sodium	57.6	1.00	mg/L	10.5	46.9	103	70-130			
Matrix Spike (DD11069-MS2)		**Source: D1D1502-02**		Prepared: 04/16/2021 Analyzed: 04/19/2021						
Boron	0.521	0.0050	mg/L	0.500	0.0073	103	70-130			
Copper	0.535	0.0020	mg/L	0.500	0.0022	106	70-130			
Sodium	57.8	1.00	mg/L	10.5	47.0	103	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11374 - 624.1 - EPA 624.1										
Blank (DD11374-BLK1)			Prepared & Analyzed: 04/16/2021							
Acrolein	<20.0	20.0	ug/L							
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*50.6*		ug/L	*50.0*		*101*	*70-130*			
Surrogate: Toluene-d8	*51.8*		ug/L	*50.0*		*104*	*70-130*			
Surrogate: Pentafluorobenzene	*47.2*		ug/L	*50.0*		*94.5*	*70-130*			
LCS (DD11374-BS1)			Prepared & Analyzed: 04/16/2021							
Acrolein	56.9	20.0	ug/L	50.0		114	60-140			
2-Chloroethyl vinyl ether	47.2	20.0	ug/L	50.0		94.5	1-305			
Surrogate: 1,2-Dichloroethane-d4	*50.8*		ug/L	*50.0*		*102*	*70-130*			
Surrogate: Toluene-d8	*53.3*		ug/L	*50.0*		*107*	*70-130*			
Surrogate: Pentafluorobenzene	*48.6*		ug/L	*50.0*		*97.3*	*70-130*			
Matrix Spike (DD11374-MS1)		**Source: D1D1520-07**		Prepared & Analyzed: 04/16/2021						
Acrolein	65.8	20.0	ug/L	50.0	ND	132	40-160			
2-Chloroethyl vinyl ether	51.5	20.0	ug/L	50.0	ND	103	1-305			
Surrogate: 1,2-Dichloroethane-d4	*50.7*		ug/L	*50.0*		*101*	*70-130*			
Surrogate: Toluene-d8	*52.5*		ug/L	*50.0*		*105*	*70-130*			
Surrogate: Pentafluorobenzene	*50.8*		ug/L	*50.0*		*102*	*70-130*			
Matrix Spike Dup (DD11374-MSD1)		**Source: D1D1520-07**		Prepared & Analyzed: 04/16/2021						
Acrolein	73.0	20.0	ug/L	50.0	ND	146	40-160	10.4	60	
2-Chloroethyl vinyl ether	52.4	20.0	ug/L	50.0	ND	105	1-305	1.64	71	
Surrogate: 1,2-Dichloroethane-d4	*49.9*		ug/L	*50.0*		*99.8*	*70-130*			
Surrogate: Toluene-d8	*51.8*		ug/L	*50.0*		*104*	*70-130*			
Surrogate: Pentafluorobenzene	*50.1*		ug/L	*50.0*		*100*	*70-130*			
Batch DD11387 - 624.1 - EPA 624.1										
Blank (DD11387-BLK1)			Prepared & Analyzed: 04/20/2021							
Acetone	<10.0	10.0	ug/L							
Acrylonitrile	<20.0	20.0	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11387 - 624.1 - EPA 624.1										
Blank (DD11387-BLK1)			Prepared & Analyzed: 04/20/2021							
Benzene	<5.00	5.00	ug/L							
Bromodichloromethane	<5.00	5.00	ug/L							
Bromoform	<5.00	5.00	ug/L							
Bromomethane	<5.00	5.00	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Carbon disulfide	<5.00	5.00	ug/L							
Carbon tetrachloride	<5.00	5.00	ug/L							
Chlorobenzene	<5.00	5.00	ug/L							
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L							
Chloroform	<4.00	4.00	ug/L							
Chloromethane	<5.00	5.00	ug/L							
Dibromochloromethane	<5.00	5.00	ug/L							
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L							
1,2-Dichlorobenzene	<5.00	5.00	ug/L							
1,3-Dichlorobenzene	<5.00	5.00	ug/L							
1,4-Dichlorobenzene	<5.00	5.00	ug/L							
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L							
1,2-Dichloroethane	<5.00	5.00	ug/L							
1,1-Dichloroethane	<5.00	5.00	ug/L							
cis-1,2-Dichloroethene	<5.00	5.00	ug/L							
1,1-Dichloroethene	<5.00	5.00	ug/L							
trans-1,2-Dichloroethene	<4.00	4.00	ug/L							
1,2-Dichloropropane	<5.00	5.00	ug/L							
cis-1,3-Dichloropropene	<5.00	5.00	ug/L							
trans-1,3-Dichloropropene	<5.00	5.00	ug/L							
Ethylbenzene	<5.00	5.00	ug/L							
2-Hexanone (MBK)	<10.0	10.0	ug/L							
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L							
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L							
Styrene	<5.00	5.00	ug/L							
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L							
Tetrachloroethene	<5.00	5.00	ug/L							
Toluene	<5.00	5.00	ug/L							
1,1,2-Trichloroethane	<5.00	5.00	ug/L							
1,1,1-Trichloroethane	<5.00	5.00	ug/L							
Trichloroethene	<5.00	5.00	ug/L							
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L							
Vinyl chloride	<5.00	5.00	ug/L							
m,p-Xylene	<10.0	10.0	ug/L							
o-Xylene	<5.00	5.00	ug/L							
Vinyl acetate	<5.00	5.00	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11387 - 624.1 - EPA 624.1										
Blank (DD11387-BLK1)				Prepared & Analyzed: 04/20/2021						
Surrogate: 1,2-Dichloroethane-d4	*51.9*		ug/L	*50.0*		*104*	*70-130*			
Surrogate: Toluene-d8	*53.9*		ug/L	*50.0*		*108*	*70-130*			
LCS (DD11387-BS1)				Prepared & Analyzed: 04/20/2021						
Acetone	37.3	10.0	ug/L	50.0		74.7	42.1-136			
Acrylonitrile	46.6	20.0	ug/L	50.0		93.2	60-140			
Benzene	48.5	5.00	ug/L	50.0		96.9	65-135			
Bromodichloromethane	49.9	5.00	ug/L	50.0		99.8	65-135			
Bromoform	50.5	5.00	ug/L	50.0		101	70-130			
Bromomethane	50.4	5.00	ug/L	50.0		101	15-185			
2-Butanone (MEK)	45.9	10.0	ug/L	50.0		91.8	63.1-143			
Carbon disulfide	34.0	5.00	ug/L	50.0		68.0	63.5-124			
Carbon tetrachloride	48.8	5.00	ug/L	50.0		97.5	70-130			
Chlorobenzene	47.4	5.00	ug/L	50.0		94.9	65-135			
Chloroethane (Ethyl chloride)	70.8	5.00	ug/L	50.0		142	40-160			
Chloroform	47.1	4.00	ug/L	50.0		94.3	70-135			
Chloromethane	44.8	5.00	ug/L	50.0		89.6	1-205			
Dibromochloromethane	51.4	5.00	ug/L	50.0		103	70-135			
Dibromomethane (Methylene bromide)	48.0	5.00	ug/L	50.0		96.1	73.8-124			
1,2-Dichlorobenzene	47.8	5.00	ug/L	50.0		95.6	65-135			
1,3-Dichlorobenzene	47.4	5.00	ug/L	50.0		94.9	70-130			
1,4-Dichlorobenzene	48.0	5.00	ug/L	50.0		96.1	65-135			
Dichlorodifluoromethane (Freon-12)	45.1	5.00	ug/L	50.0		90.3	34.7-129			
1,2-Dichloroethane	48.0	5.00	ug/L	50.0		96.0	70-130			
1,1-Dichloroethane	46.8	5.00	ug/L	50.0		93.6	70-130			
cis-1,2-Dichloroethene	44.7	5.00	ug/L	50.0		89.5	75.5-125			
1,1-Dichloroethene	48.1	5.00	ug/L	50.0		96.3	50-150			
trans-1,2-Dichloroethene	51.2	4.00	ug/L	50.0		102	70-130			
1,2-Dichloropropane	50.4	5.00	ug/L	50.0		101	35-165			
cis-1,3-Dichloropropene	49.5	5.00	ug/L	50.0		99.0	25-175			
trans-1,3-Dichloropropene	47.7	5.00	ug/L	50.0		95.4	50-150			
Ethylbenzene	48.0	5.00	ug/L	50.0		95.9	60-140			
2-Hexanone (MBK)	47.4	10.0	ug/L	50.0		94.8	73.6-130			
Methyl tert-butyl ether (MTBE)	46.4	5.00	ug/L	50.0		92.8	69-151			
Methylene chloride (Dichloromethane)	47.0	1.00	ug/L	50.0		93.9	60-140			
4-Methyl-2-pentanone (MIBK)	46.7	10.0	ug/L	50.0		93.4	72.5-129			
Styrene	51.8	5.00	ug/L	50.0		104	79.2-127			
1,1,2,2-Tetrachloroethane	50.6	5.00	ug/L	50.0		101	60-140			
Tetrachloroethene	48.8	5.00	ug/L	50.0		97.6	70-130			
Toluene	48.5	5.00	ug/L	50.0		96.9	70-130			
1,1,2-Trichloroethane	48.9	5.00	ug/L	50.0		97.8	70-130			
1,1,1-Trichloroethane	47.9	5.00	ug/L	50.0		95.7	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11387 - 624.1 - EPA 624.1										
LCS (DD11387-BS1)				Prepared & Analyzed: 04/20/2021						
Trichloroethene	50.1	5.00	ug/L	50.0		100	65-135			
Trichlorofluoromethane (Freon 11)	27.6	5.00	ug/L	50.0		55.2	50-150			
Vinyl chloride	46.9	5.00	ug/L	50.0		93.9	5-195			
m,p-Xylene	109	10.0	ug/L	100		109	77.1-129			
o-Xylene	50.3	5.00	ug/L	50.0		101	78.8-126			
Vinyl acetate	51.3	5.00	ug/L	50.0		103	60-140			
Surrogate: 1,2-Dichloroethane-d4	*48.9*		ug/L	*50.0*		*97.8*	*70-130*			
Surrogate: Toluene-d8	*49.6*		ug/L	*50.0*		*99.2*	*70-130*			
Surrogate: Pentafluorobenzene	*52.5*		ug/L	*50.0*		*105*	*70-130*			
Matrix Spike (DD11387-MS1)	**Source: D1D1520-08**			Prepared & Analyzed: 04/20/2021						
Acetone	32.2	10.0	ug/L	50.0	6.29	51.8	0-200			
Acrylonitrile	39.8	20.0	ug/L	50.0	ND	79.7	40-160			
Benzene	46.0	5.00	ug/L	50.0	ND	91.9	37-151			
Bromodichloromethane	45.7	5.00	ug/L	50.0	ND	91.5	35-155			
Bromoform	44.7	5.00	ug/L	50.0	ND	89.4	45-169			
Bromomethane	54.1	5.00	ug/L	50.0	ND	108	1-242			
2-Butanone (MEK)	39.2	10.0	ug/L	50.0	ND	78.4	0-200			
Carbon disulfide	33.1	5.00	ug/L	50.0	ND	66.2	0-200			
Carbon tetrachloride	50.1	5.00	ug/L	50.0	ND	100	70-140			
Chlorobenzene	44.7	5.00	ug/L	50.0	ND	89.5	37-160			
Chloroethane (Ethyl chloride)	82.5	5.00	ug/L	50.0	ND	165	14-230			
Chloroform	45.3	4.00	ug/L	50.0	ND	90.6	51-138			
Chloromethane	45.6	5.00	ug/L	50.0	ND	91.2	1-273			
Dibromochloromethane	45.5	5.00	ug/L	50.0	ND	91.0	53-149			
Dibromomethane (Methylene bromide)	45.9	5.00	ug/L	50.0	ND	91.9	0-200			
1,2-Dichlorobenzene	43.0	5.00	ug/L	50.0	ND	86.0	18-190			
1,3-Dichlorobenzene	44.1	5.00	ug/L	50.0	ND	88.2	59-156			
1,4-Dichlorobenzene	42.9	5.00	ug/L	50.0	ND	85.7	18-190			
Dichlorodifluoromethane (Freon-12)	45.1	5.00	ug/L	50.0	ND	90.3	0-200			
1,2-Dichloroethane	45.7	5.00	ug/L	50.0	ND	91.4	49-155			
1,1-Dichloroethane	44.7	5.00	ug/L	50.0	ND	89.4	59-155			
cis-1,2-Dichloroethene	42.5	5.00	ug/L	50.0	ND	84.9	0-200			
1,1-Dichloroethene	47.5	5.00	ug/L	50.0	ND	95.0	1-234			
trans-1,2-Dichloroethene	48.8	4.00	ug/L	50.0	ND	97.6	54-156			
1,2-Dichloropropane	46.8	5.00	ug/L	50.0	ND	93.7	1-210			
cis-1,3-Dichloropropene	43.8	5.00	ug/L	50.0	ND	87.7	1-227			
trans-1,3-Dichloropropene	43.1	5.00	ug/L	50.0	ND	86.2	17-183			
Ethylbenzene	45.8	5.00	ug/L	50.0	ND	91.5	37-162			
2-Hexanone (MBK)	40.0	10.0	ug/L	50.0	ND	80.1	0-200			
Methyl tert-butyl ether (MTBE)	41.9	5.00	ug/L	50.0	ND	83.9	0-200			
Methylene chloride (Dichloromethane)	44.7	1.00	ug/L	50.0	ND	89.4	1-221			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11387 - 624.1 - EPA 624.1										
Matrix Spike (DD11387-MS1)	**Source: D1D1520-08**		Prepared & Analyzed: 04/20/2021							
4-Methyl-2-pentanone (MIBK)	40.1	10.0	ug/L	50.0	ND	80.2	0-200			
Styrene	48.8	5.00	ug/L	50.0	ND	97.5	0-200			
1,1,2,2-Tetrachloroethane	44.6	5.00	ug/L	50.0	ND	89.2	46-157			
Tetrachloroethene	45.3	5.00	ug/L	50.0	ND	90.6	64-148			
Toluene	46.2	5.00	ug/L	50.0	ND	92.4	47-150			
1,1,2-Trichloroethane	42.7	5.00	ug/L	50.0	ND	85.4	52-150			
1,1,1-Trichloroethane	47.9	5.00	ug/L	50.0	ND	95.8	52-162			
Trichloroethene	48.4	5.00	ug/L	50.0	ND	96.8	70-157			
Trichlorofluoromethane (Freon 11)	20.6	5.00	ug/L	50.0	ND	41.2	17-181			
Vinyl chloride	47.8	5.00	ug/L	50.0	ND	95.6	1-251			
m,p-Xylene	102	10.0	ug/L	100	ND	102	0-200			
o-Xylene	46.2	5.00	ug/L	50.0	ND	92.5	0-200			
Vinyl acetate	46.1	5.00	ug/L	50.0	ND	92.1	60-140			
Surrogate: 1,2-Dichloroethane-d4	*49.8*		ug/L	*50.0*		*99.7*	*70-130*			
Surrogate: Toluene-d8	*49.1*		ug/L	*50.0*		*98.2*	*70-130*			
Surrogate: Pentafluorobenzene	*51.6*		ug/L	*50.0*		*103*	*70-130*			
Matrix Spike Dup (DD11387-MSD1)	**Source: D1D1520-08**		Prepared & Analyzed: 04/20/2021							
Acetone	32.8	10.0	ug/L	50.0	6.29	53.1	0-200	2.03	200	
Acrylonitrile	41.3	20.0	ug/L	50.0	ND	82.6	40-160	3.65	60	
Benzene	43.9	5.00	ug/L	50.0	ND	87.8	37-151	4.61	61	
Bromodichloromethane	45.4	5.00	ug/L	50.0	ND	90.9	35-155	0.658	56	
Bromoform	45.9	5.00	ug/L	50.0	ND	91.8	45-169	2.56	42	
Bromomethane	51.5	5.00	ug/L	50.0	ND	103	1-242	4.91	61	
2-Butanone (MEK)	38.8	10.0	ug/L	50.0	ND	77.6	0-200	1.13	200	
Carbon disulfide	31.6	5.00	ug/L	50.0	ND	63.3	0-200	4.54	200	
Carbon tetrachloride	47.0	5.00	ug/L	50.0	ND	94.1	70-140	6.32	41	
Chlorobenzene	44.1	5.00	ug/L	50.0	ND	88.3	37-160	1.37	53	
Chloroethane (Ethyl chloride)	76.4	5.00	ug/L	50.0	ND	153	14-230	7.64	78	
Chloroform	44.7	4.00	ug/L	50.0	ND	89.4	51-138	1.42	54	
Chloromethane	43.6	5.00	ug/L	50.0	ND	87.1	1-273	4.58	60	
Dibromochloromethane	45.7	5.00	ug/L	50.0	ND	91.3	53-149	0.329	50	
Dibromomethane (Methylene bromide)	45.4	5.00	ug/L	50.0	ND	90.7	0-200	1.25	200	
1,2-Dichlorobenzene	42.2	5.00	ug/L	50.0	ND	84.5	18-190	1.76	57	
1,3-Dichlorobenzene	42.6	5.00	ug/L	50.0	ND	85.1	59-156	3.51	43	
1,4-Dichlorobenzene	43.1	5.00	ug/L	50.0	ND	86.2	18-190	0.512	57	
Dichlorodifluoromethane (Freon-12)	45.2	5.00	ug/L	50.0	ND	90.4	0-200	0.177	200	
1,2-Dichloroethane	43.4	5.00	ug/L	50.0	ND	86.7	49-155	5.30	49	
1,1-Dichloroethane	42.9	5.00	ug/L	50.0	ND	85.8	59-155	4.04	40	
cis-1,2-Dichloroethene	40.1	5.00	ug/L	50.0	ND	80.2	0-200	5.72	200	
1,1-Dichloroethene	47.4	5.00	ug/L	50.0	ND	94.7	1-234	0.337	32	
trans-1,2-Dichloroethene	48.3	4.00	ug/L	50.0	ND	96.6	54-156	1.03	45	
1,2-Dichloropropane	46.2	5.00	ug/L	50.0	ND	92.3	1-210	1.46	55	

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11387 - 624.1 - EPA 624.1										
Matrix Spike Dup (DD11387-MSD1)	**Source: D1D1520-08**		Prepared & Analyzed: 04/20/2021							
cis-1,3-Dichloropropene	44.4	5.00	ug/L	50.0	ND	88.7	1-227	1.18	58	
trans-1,3-Dichloropropene	42.0	5.00	ug/L	50.0	ND	84.0	17-183	2.68	86	
Ethylbenzene	44.0	5.00	ug/L	50.0	ND	87.9	37-162	4.03	63	
2-Hexanone (MBK)	40.4	10.0	ug/L	50.0	ND	80.7	0-200	0.821	200	
Methyl tert-butyl ether (MTBE)	42.2	5.00	ug/L	50.0	ND	84.4	0-200	0.665	200	
Methylene chloride (Dichloromethane)	43.9	1.00	ug/L	50.0	ND	87.8	1-221	1.78	28	
4-Methyl-2-pentanone (MIBK)	41.4	10.0	ug/L	50.0	ND	82.7	0-200	3.12	200	
Styrene	47.8	5.00	ug/L	50.0	ND	95.5	0-200	2.09	200	
1,1,2,2-Tetrachloroethane	46.1	5.00	ug/L	50.0	ND	92.2	46-157	3.40	61	
Tetrachloroethene	43.8	5.00	ug/L	50.0	ND	87.7	64-148	3.32	39	
Toluene	44.1	5.00	ug/L	50.0	ND	88.2	47-150	4.70	41	
1,1,2-Trichloroethane	44.1	5.00	ug/L	50.0	ND	88.2	52-150	3.18	45	
1,1,1-Trichloroethane	46.4	5.00	ug/L	50.0	ND	92.7	52-162	3.23	36	
Trichloroethene	45.0	5.00	ug/L	50.0	ND	90.0	70-157	7.26	48	
Trichlorofluoromethane (Freon 11)	20.1	5.00	ug/L	50.0	ND	40.2	17-181	2.36	84	
Vinyl chloride	47.5	5.00	ug/L	50.0	ND	94.9	1-251	0.693	66	
m,p-Xylene	99.5	10.0	ug/L	100	ND	99.5	0-200	2.91	200	
o-Xylene	45.9	5.00	ug/L	50.0	ND	91.7	0-200	0.847	200	
Vinyl acetate	45.7	5.00	ug/L	50.0	ND	91.5	60-140	0.719	25	
Surrogate: 1,2-Dichloroethane-d4	*48.7*		ug/L	*50.0*		*97.5*	*70-130*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.0*		*98.8*	*70-130*			
Surrogate: Pentafluorobenzene	*51.4*		ug/L	*50.0*		*103*	*70-130*			

Definitions

A5:	Sample was filtered (0.45 um) before analysis.
MCL:	US EPA Maximum Contaminant Level
mg CaCO3/L	Milligrams Calcium Carbonate per Liter
mg/L:	Milligrams per Liter
RL:	Reporting Limit
RPD:	Relative Percent Difference
ug/L:	Micrograms per Liter
Y1:	Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 2.4°C

CERTIFICATE OF ANALYSIS

D1D1542

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville	
M-CT008	Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Melisa L. Montgomery
Quality Assurance Officer
Reported: 04/22/2021 15:09

MICROBAC

Cl
61 Loui
Tel: (8

D1D1542
W & C - Plymouth

FOR LAB USE ONLY
Lab WO#
Project Manager

Microbac Laboratories, Inc.

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
DELIVERY: ROBERT BLANCHARD
E-MAIL: [redacted]
PHONE: 508-830-4159 FAX: 508-732-0238

BILL TO: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
PURCHASE ORDER #
ATTENTION: ACCOUNTS PAYABLE
PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP
LOCATION: ID 11773
WELLS - QUARTERLY
ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL
ROBERT SCOTT
PHONE: CELL - 860-204-7988
FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # 1S (250 mL)	4/14/21	10:34		X	WW	1	X	X											X			
Well # 1S (250 mL)	4/14/21	10:34		X	WW	1			X	X								X				
Well # 1S (250 mL)(filtered)	4/14/21	10:34		X	WW	1					X							X				
Well # 1S (250 mL)	4/14/21	10:34		X	WW	1						X						X				
Well # 1S (250 mL)	4/14/21	10:34		X	WW	1							X					X				
Well # 1S (250 mL)	4/14/21	10:34		X	WW	1								X	X	X					X	
Well 1S	4/14/21	10:34		X	WW	2											X	X				
Well 1S	4/14/21	10:34		X	WW	2											X			X		
										PRESERVATION VERIFIED Initials												

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	4/14/21	10:34
RECEIVED:		
RELINQUISHED:	4/14/21	15:47
RECEIVED:	4/14/21	15:47
RELINQUISHED:	4/14/21	17:32
RECEIVED:	4/14/21	1732

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☐ AMBIENT ☐

2.4°C

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1D2545

Project Description

Wells- Quarterly

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Friday, May 7, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1D2545

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells- Quarterly

Project / PO Number: 346346
Received: 04/27/2021
Reported: 05/07/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well 6D	D1D2545-01	Groundwater	Grab		04/27/21 09:33	04/27/21 16:20
Well 6D	D1D2545-02	Groundwater	Grab		04/27/21 09:33	04/27/21 16:20
Well 6D (filtered)	D1D2545-03	Groundwater	Grab		04/27/21 09:33	04/27/21 16:20
Well 6D	D1D2545-04	Groundwater	Grab		04/27/21 09:33	04/27/21 16:20
Well 6D	D1D2545-05	Groundwater	Grab		04/27/21 09:33	04/27/21 16:20
Well 6D	D1D2545-06	Groundwater	Grab		04/27/21 09:33	04/27/21 16:20
Well 6D	D1D2545-07	Groundwater	Grab		04/27/21 09:33	04/27/21 16:20
Well 6D	D1D2545-08	Groundwater	Grab		04/27/21 09:33	04/27/21 16:20

CERTIFICATE OF ANALYSIS

D1D2545

Analytical Testing Parameters

Client Sample ID: Well 6D
Sample Matrix: Groundwater
Lab Sample ID: D1D2545-01
Collected By: Customer
Collection Date: 04/27/2021 9:33

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 351.1								
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L	1		04/28/21 0917	04/29/21 1517	CLW
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0159**	0.0106	mg/L	1		04/28/21 1900	04/29/21 1137	CLW

Client Sample ID: Well 6D
Sample Matrix: Groundwater
Lab Sample ID: D1D2545-02
Collected By: Customer
Collection Date: 04/27/2021 9:33

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-NO_3^- F-2011								
Nitrate as N	**1.84**	0.0500	mg/L	1			04/27/21 1836	DJM
Nitrite as N	<0.0100	0.0100	mg/L	1	**Y1**		04/27/21 1836	DJM

Client Sample ID: Well 6D (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1D2545-03
Collected By: Customer
Collection Date: 04/27/2021 9:33

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0250**	0.0100	mg/L	1	**R3**	04/27/21 1832	04/27/21 2039	DJM

Client Sample ID: Well 6D
Sample Matrix: Groundwater
Lab Sample ID: D1D2545-04
Collected By: Customer
Collection Date: 04/27/2021 9:33

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 2320 B-2011								
Alkalinity to pH 4.5	**5.00**	1.00	mg CaCO3/L	1			04/29/21 1500	SRF

Client Sample ID: Well 6D
Sample Matrix: Groundwater
Lab Sample ID: D1D2545-05
Collected By: Customer
Collection Date: 04/27/2021 9:33

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-Cl E-2011								
Chloride	**72.5**	2.00	mg/L	1			05/03/21 1200	CLW

CERTIFICATE OF ANALYSIS

D1D2545

Client Sample ID:	Well 6D		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D2545-06	**Collection Date:**	04/27/2021 9:33

Metals Total by ICP	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.7, Rv. 4.4 (1994)								
Boron	**0.0095**	0.0050	mg/L	1	**Y1**	04/29/21 1349	04/30/21 1703	DLO
Copper	<0.0020	0.0020	mg/L	1		04/29/21 1349	04/30/21 1703	DLO
Sodium	**24.6**	1.00	mg/L	1		04/29/21 1349	04/30/21 1703	DLO

Client Sample ID:	Well 6D		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D2545-07	**Collection Date:**	04/27/2021 9:33

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acrolein	<20.0	20.0	ug/L	1			04/29/21 1656	JAN
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	1			04/29/21 1656	JAN
Surrogate: 1,2-Dichloroethane-d4	99.0	Limit: 70-130	% Rec	1			04/29/21 1656	JAN
Surrogate: Toluene-d8	104	Limit: 70-130	% Rec	1			04/29/21 1656	JAN
Surrogate: Pentafluorobenzene	102	Limit: 70-130	% Rec	1			04/29/21 1656	JAN

CERTIFICATE OF ANALYSIS

D1D2545

Client Sample ID:	Well 6D		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D2545-08	**Collection Date:**	04/27/2021 9:33

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acetone	<10.0	10.0	ug/L	1	**Y1**		05/04/21 1825	RSD
Acrylonitrile	<20.0	20.0	ug/L	1			05/04/21 1825	RSD
Benzene	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
Bromodichloromethane	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
Bromoform	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
Bromomethane	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
2-Butanone (MEK)	<10.0	10.0	ug/L	1	**Y1**		05/04/21 1825	RSD
Carbon disulfide	<5.00	5.00	ug/L	1	**Y1**		05/04/21 1825	RSD
Carbon tetrachloride	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
Chlorobenzene	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
Chloroform	<4.00	4.00	ug/L	1			05/04/21 1825	RSD
Chloromethane	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
Dibromochloromethane	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L	1	**Y1**		05/04/21 1825	RSD
1,2-Dichlorobenzene	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
1,3-Dichlorobenzene	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
1,4-Dichlorobenzene	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L	1	**Y1**		05/04/21 1825	RSD
1,2-Dichloroethane	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
1,1-Dichloroethane	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
cis-1,2-Dichloroethene	<5.00	5.00	ug/L	1	**Y1**		05/04/21 1825	RSD
1,1-Dichloroethene	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
trans-1,2-Dichloroethene	<4.00	4.00	ug/L	1			05/04/21 1825	RSD
1,2-Dichloropropane	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
cis-1,3-Dichloropropene	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
trans-1,3-Dichloropropene	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
Ethylbenzene	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
2-Hexanone (MBK)	<10.0	10.0	ug/L	1	**Y1**		05/04/21 1825	RSD
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L	1	**Y1**		05/04/21 1825	RSD
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L	1			05/04/21 1825	RSD
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L	1	**Y1**		05/04/21 1825	RSD
Styrene	<5.00	5.00	ug/L	1	**Y1**		05/04/21 1825	RSD
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
Tetrachloroethene	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
Toluene	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
1,1,2-Trichloroethane	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
1,1,1-Trichloroethane	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
Trichloroethene	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
Vinyl chloride	<5.00	5.00	ug/L	1			05/04/21 1825	RSD
m,p-Xylene	<10.0	10.0	ug/L	1	**Y1**		05/04/21 1825	RSD

CERTIFICATE OF ANALYSIS

D1D2545

Client Sample ID:	Well 6D		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D2545-08	**Collection Date:**	04/27/2021 9:33

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
o-Xylene	<5.00	5.00	ug/L	1	**Y1**		05/04/21 1825	RSD
Vinyl acetate	<5.00	5.00	ug/L	1	**Y1**		05/04/21 1825	RSD
Surrogate: 1,2-Dichloroethane-d4	92.5	Limit: 70-130	% Rec	1			05/04/21 1825	RSD
Surrogate: Toluene-d8	101	Limit: 70-130	% Rec	1			05/04/21 1825	RSD
Surrogate: Pentafluorobenzene	103	Limit: 70-130	% Rec	1			05/04/21 1825	RSD

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-$NO3^-$ F-2011	DD11737	DD11737-DUP1	D1D2495-02
		DD11737-DUP1	D1D2495-02
		DD11737-MS1	D1D2495-02
		DD11737-MS1	D1D2495-02
		DD11737-MSD1	D1D2495-02
		DD11737-MSD1	D1D2495-02
		DD11737-BS1	
		DD11737-BS2	
		DD11737-BLK1	
		DD11737-BLK1	
		D1D2545-02	Well 6D
		D1D2545-02	Well 6D

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DD11775	DD11775-BLK1	
		DD11775-BS1	
		D1D2545-03	Well 6D (filtered)
		DD11775-DUP1	D1D2545-03
		DD11775-MS1	D1D2545-03
		DD11775-MS2	D1D2548-03

Method	Batch	Laboratory ID	Client / Source ID
EPA 351.1	DD11795	DD11795-BS1	
		DD11795-BLK1	
		DD11795-DUP1	D1D2493-04
		DD11795-MS1	D1D2493-04
		DD11795-MS2	L1D0515-01
		D1D2545-01	Well 6D

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DD11849	DD11849-BLK1	
		DD11849-BS1	
		DD11849-MS2	L1D0529-01
		D1D2545-01	Well 6D
		DD11849-DUP1	L1D0510-02
		DD11849-MS1	L1D0510-02

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.7, Rv. 4.4 (1994)	DD11894	DD11894-BLK1	
		DD11894-BS1	
		DD11894-DUP1	D1D2619-02

EPA 200.7, Rv. 4.4 (1994)	DD11894	DD11894-MS1	D1D2487-01
		D1D2545-06	Well 6D
		D1D2545-06	Well 6D

Method	Batch	Laboratory ID	Client / Source ID
SM 2320 B-2011	DD11941	DD11941-BLK1	
		DD11941-BS1	
		D1D2545-04	Well 6D
		DD11941-DUP1	D1D2611-03

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-Cl E-2011	DE10004	DE10004-BS1	
		DE10004-BLK1	
		DE10004-DUP1	D1D2548-05
		DE10004-MS1	D1D2548-05
		DE10004-MSD1	D1D2548-05
		D1D2545-05	Well 6D

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DE10010	D1D2545-07	Well 6D

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DE10351	DE10351-BS1	
		DE10351-BLK1	
		D1D2545-08	Well 6D
		DE10351-MS1	D1D2545-08
		DE10351-MSD1	D1D2545-08

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11737 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Blank (DD11737-BLK1)			Prepared & Analyzed: 04/27/2021							
Nitrite as N	<0.0100	0.0100	mg/L							
Nitrate as N	<0.0500	0.0500	mg/L							
LCS (DD11737-BS1)			Prepared & Analyzed: 04/27/2021							
Nitrate as N	5.16	0.0500	mg/L	5.00		103	90-110			
LCS (DD11737-BS2)			Prepared & Analyzed: 04/27/2021							
Nitrite as N	1.00	0.0100	mg/L	1.00		100	90-110			
Duplicate (DD11737-DUP1)	**Source: D1D2495-02**		Prepared & Analyzed: 04/27/2021							
Nitrite as N	0.523	0.0100	mg/L		0.534			2.12	20	A5
Nitrate as N	<0.0500	0.0500	mg/L		ND				20	A5
Matrix Spike (DD11737-MS1)	**Source: D1D2495-02**		Prepared & Analyzed: 04/27/2021							
Nitrite as N	1.52	0.0100	mg/L	1.00	0.534	98.4	75-125			A5

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11737 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Matrix Spike (DD11737-MS1)		**Source: D1D2495-02**	Prepared & Analyzed: 04/27/2021							
Nitrate as N	5.16	0.0500	mg/L	5.00	ND	103	75-125			A5
Matrix Spike Dup (DD11737-MSD1)		**Source: D1D2495-02**	Prepared & Analyzed: 04/27/2021							
Nitrite as N	1.52	0.0100	mg/L	1.00	0.534	98.9	75-125	0.368	20	A5
Nitrate as N	5.05	0.0500	mg/L	5.00	ND	101	75-125	2.07	20	A5
Batch DD11775 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DD11775-BLK1)			Prepared & Analyzed: 04/27/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DD11775-BS1)			Prepared & Analyzed: 04/27/2021							
Ortho-phosphate as P	1.01	0.0100	mg/L	1.00		101	90-110			
Duplicate (DD11775-DUP1)		**Source: D1D2545-03**	Prepared & Analyzed: 04/27/2021							
Ortho-phosphate as P	0.0200	0.0100	mg/L		0.0250			22.2	20	R3
Matrix Spike (DD11775-MS1)		**Source: D1D2545-03**	Prepared & Analyzed: 04/27/2021							
Ortho-phosphate as P	0.951	0.0100	mg/L	1.00	0.0250	92.6	90-110			
Matrix Spike (DD11775-MS2)		**Source: D1D2548-03**	Prepared & Analyzed: 04/27/2021							
Ortho-phosphate as P	0.988	0.0100	mg/L	1.00	0.0120	97.5	90-110			
Batch DD11795 - Wet-Digestion-W - EPA 351.1										
Blank (DD11795-BLK1)			Prepared: 04/28/2021 Analyzed: 04/29/2021							
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L							
LCS (DD11795-BS1)			Prepared: 04/28/2021 Analyzed: 04/29/2021							
Total Kjeldahl Nitrogen (TKN)	4.86	0.200	mg/L	5.00		97.3	90-110			
Duplicate (DD11795-DUP1)		**Source: D1D2493-04**	Prepared: 04/28/2021 Analyzed: 04/29/2021							
Total Kjeldahl Nitrogen (TKN)	2.12	0.200	mg/L		2.38			11.8	20	
Matrix Spike (DD11795-MS1)		**Source: D1D2493-04**	Prepared: 04/28/2021 Analyzed: 04/29/2021							
Total Kjeldahl Nitrogen (TKN)	12.2	0.200	mg/L	10.0	2.38	98.2	90-110			
Matrix Spike (DD11795-MS2)		**Source: L1D0515-01**	Prepared: 04/28/2021 Analyzed: 04/29/2021							
Total Kjeldahl Nitrogen (TKN)	10.8	0.200	mg/L	10.0	0.576	103	90-110			
Batch DD11849 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DD11849-BLK1)			Prepared: 04/28/2021 Analyzed: 04/29/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DD11849-BS1)			Prepared: 04/28/2021 Analyzed: 04/29/2021							
Phosphorus - Total as P	0.932	0.0106	mg/L	1.00		93.2	90-110			
Duplicate (DD11849-DUP1)		**Source: L1D0510-02**	Prepared: 04/28/2021 Analyzed: 04/29/2021							
Phosphorus - Total as P	2.09	0.0213	mg/L		2.08			0.561	20	
Matrix Spike (DD11849-MS1)		**Source: L1D0510-02**	Prepared: 04/28/2021 Analyzed: 04/29/2021							
Phosphorus - Total as P	3.36	0.0213	mg/L	1.25	2.08	102	90-110			
Matrix Spike (DD11849-MS2)		**Source: L1D0529-01**	Prepared: 04/28/2021 Analyzed: 04/29/2021							

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11849 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Matrix Spike (DD11849-MS2)	**Source: L1D0529-01**		Prepared: 04/28/2021 Analyzed: 04/29/2021							
Phosphorus - Total as P	1.22	0.0106	mg/L	1.25	0.0553	92.9	90-110			
Batch DD11941 - Wet Chem - W - SM 2320 B-2011										
Blank (DD11941-BLK1)			Prepared & Analyzed: 04/29/2021							
Alkalinity to pH 4.5	<1.00	1.00	mg CaCO3/ L							
LCS (DD11941-BS1)			Prepared & Analyzed: 04/29/2021							
Alkalinity to pH 4.5	50.0	1.00	mg CaCO3/ L	50.0		100	90-110			
Duplicate (DD11941-DUP1)	**Source: D1D2611-03**		Prepared & Analyzed: 04/29/2021							
Alkalinity to pH 4.5	133	1.00	mg CaCO3/ L		133			0.00	20	
Batch DE10004 - Wet Chem - W - SM 4500-Cl E-2011										
Blank (DE10004-BLK1)			Prepared & Analyzed: 05/03/2021							
Chloride	<2.00	2.00	mg/L							
LCS (DE10004-BS1)			Prepared & Analyzed: 05/03/2021							
Chloride	19.4	2.00	mg/L	20.0		96.8	90-110			
Duplicate (DE10004-DUP1)	**Source: D1D2548-05**		Prepared & Analyzed: 05/03/2021							
Chloride	27.1	2.00	mg/L		26.6			1.73	20	
Matrix Spike (DE10004-MS1)	**Source: D1D2548-05**		Prepared & Analyzed: 05/03/2021							
Chloride	49.6	2.00	mg/L	20.0	26.6	115	75-125			
Matrix Spike Dup (DE10004-MSD1)	**Source: D1D2548-05**		Prepared & Analyzed: 05/03/2021							
Chloride	48.3	2.00	mg/L	20.0	26.6	108	75-125	2.59	20	

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11894 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DD11894-BLK1)			Prepared: 04/29/2021 Analyzed: 04/30/2021							
Boron	<0.0050	0.0050	mg/L							
Copper	<0.0020	0.0020	mg/L							
Sodium	<1.00	1.00	mg/L							
LCS (DD11894-BS1)			Prepared: 04/29/2021 Analyzed: 04/30/2021							
Boron	0.537	0.0050	mg/L	0.500		107	85-115			
Copper	0.532	0.0020	mg/L	0.500		106	85-115			
Sodium	11.5	1.00	mg/L	10.5		110	85-115			
Duplicate (DD11894-DUP1)	**Source: D1D2619-02**		Prepared: 04/29/2021 Analyzed: 04/30/2021							
Boron	0.0109	0.0050	mg/L		0.0109			0.219	20	
Copper	<0.0020	0.0020	mg/L		ND				20	

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11894 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Duplicate (DD11894-DUP1)		**Source: D1D2619-02**		Prepared: 04/29/2021 Analyzed: 04/30/2021						
Sodium	14.1	1.00	mg/L		14.0			0.864	20	
Matrix Spike (DD11894-MS1)		**Source: D1D2487-01**		Prepared: 04/29/2021 Analyzed: 04/30/2021						
Boron	1.34	0.0050	mg/L	0.500	0.802	107	70-130			
Copper	0.549	0.0020	mg/L	0.500	0.0182	106	70-130			
Sodium	54.4	1.00	mg/L	10.5	43.1	108	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DE10351 - 624.1 - EPA 624.1										
Blank (DE10351-BLK1)				Prepared & Analyzed: 05/04/2021						
Acetone	<10.0	10.0	ug/L							
Acrylonitrile	<20.0	20.0	ug/L							
Benzene	<5.00	5.00	ug/L							
Bromodichloromethane	<5.00	5.00	ug/L							
Bromoform	<5.00	5.00	ug/L							
Bromomethane	<5.00	5.00	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Carbon disulfide	<5.00	5.00	ug/L							
Carbon tetrachloride	<5.00	5.00	ug/L							
Chlorobenzene	<5.00	5.00	ug/L							
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L							
Chloroform	<4.00	4.00	ug/L							
Chloromethane	<5.00	5.00	ug/L							
Dibromochloromethane	<5.00	5.00	ug/L							
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L							
1,2-Dichlorobenzene	<5.00	5.00	ug/L							
1,3-Dichlorobenzene	<5.00	5.00	ug/L							
1,4-Dichlorobenzene	<5.00	5.00	ug/L							
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L							
1,2-Dichloroethane	<5.00	5.00	ug/L							
1,1-Dichloroethane	<5.00	5.00	ug/L							
cis-1,2-Dichloroethene	<5.00	5.00	ug/L							
1,1-Dichloroethene	<5.00	5.00	ug/L							
trans-1,2-Dichloroethene	<4.00	4.00	ug/L							
1,2-Dichloropropane	<5.00	5.00	ug/L							
cis-1,3-Dichloropropene	<5.00	5.00	ug/L							
trans-1,3-Dichloropropene	<5.00	5.00	ug/L							
Ethylbenzene	<5.00	5.00	ug/L							
2-Hexanone (MBK)	<10.0	10.0	ug/L							
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L							
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DE10351 - 624.1 - EPA 624.1										
Blank (DE10351-BLK1)			Prepared & Analyzed: 05/04/2021							
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L							
Styrene	<5.00	5.00	ug/L							
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L							
Tetrachloroethene	<5.00	5.00	ug/L							
Toluene	<5.00	5.00	ug/L							
1,1,2-Trichloroethane	<5.00	5.00	ug/L							
1,1,1-Trichloroethane	<5.00	5.00	ug/L							
Trichloroethene	<5.00	5.00	ug/L							
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L							
Vinyl chloride	<5.00	5.00	ug/L							
m,p-Xylene	<10.0	10.0	ug/L							
o-Xylene	<5.00	5.00	ug/L							
Vinyl acetate	<5.00	5.00	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*42.8*		ug/L	*50.0*		*85.5*	*70-130*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.0*		*98.8*	*70-130*			
LCS (DE10351-BS1)			Prepared & Analyzed: 05/04/2021							
Acetone	40.7	10.0	ug/L	50.0		81.4	42.1-136			
Acrylonitrile	50.2	20.0	ug/L	50.0		100	60-140			
Benzene	47.0	5.00	ug/L	50.0		93.9	65-135			
Bromodichloromethane	43.7	5.00	ug/L	50.0		87.5	65-135			
Bromoform	47.9	5.00	ug/L	50.0		95.8	70-130			
Bromomethane	47.1	5.00	ug/L	50.0		94.2	15-185			
2-Butanone (MEK)	49.7	10.0	ug/L	50.0		99.3	63.1-143			
Carbon disulfide	46.6	5.00	ug/L	50.0		93.2	63.5-124			
Carbon tetrachloride	48.1	5.00	ug/L	50.0		96.1	70-130			
Chlorobenzene	45.3	5.00	ug/L	50.0		90.6	65-135			
Chloroethane (Ethyl chloride)	32.1	5.00	ug/L	50.0		64.3	40-160			
Chloroform	44.3	4.00	ug/L	50.0		88.5	70-135			
Chloromethane	49.3	5.00	ug/L	50.0		98.6	1-205			
Dibromochloromethane	48.6	5.00	ug/L	50.0		97.2	70-135			
Dibromomethane (Methylene bromide)	42.5	5.00	ug/L	50.0		84.9	73.8-124			
1,2-Dichlorobenzene	46.3	5.00	ug/L	50.0		92.6	65-135			
1,3-Dichlorobenzene	46.7	5.00	ug/L	50.0		93.4	70-130			
1,4-Dichlorobenzene	44.8	5.00	ug/L	50.0		89.6	65-135			
Dichlorodifluoromethane (Freon-12)	44.3	5.00	ug/L	50.0		88.6	34.7-129			
1,2-Dichloroethane	44.1	5.00	ug/L	50.0		88.1	70-130			
1,1-Dichloroethane	45.5	5.00	ug/L	50.0		91.1	70-130			
cis-1,2-Dichloroethene	45.5	5.00	ug/L	50.0		90.9	75.5-125			
1,1-Dichloroethene	51.9	5.00	ug/L	50.0		104	50-150			
trans-1,2-Dichloroethene	53.4	4.00	ug/L	50.0		107	70-130			
1,2-Dichloropropane	48.3	5.00	ug/L	50.0		96.6	35-165			
cis-1,3-Dichloropropene	49.3	5.00	ug/L	50.0		98.6	25-175			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DE10351 - 624.1 - EPA 624.1										
LCS (DE10351-BS1)				Prepared & Analyzed: 05/04/2021						
trans-1,3-Dichloropropene	44.1	5.00	ug/L	50.0		88.1	50-150			
Ethylbenzene	44.4	5.00	ug/L	50.0		88.8	60-140			
2-Hexanone (MBK)	51.2	10.0	ug/L	50.0		102	73.6-130			
Methyl tert-butyl ether (MTBE)	45.9	5.00	ug/L	50.0		91.8	69-151			
Methylene chloride (Dichloromethane)	48.2	1.00	ug/L	50.0		96.4	60-140			
4-Methyl-2-pentanone (MIBK)	52.1	10.0	ug/L	50.0		104	72.5-129			
Styrene	45.6	5.00	ug/L	50.0		91.2	79.2-127			
1,1,2,2-Tetrachloroethane	42.8	5.00	ug/L	50.0		85.7	60-140			
Tetrachloroethene	50.7	5.00	ug/L	50.0		101	70-130			
Toluene	45.8	5.00	ug/L	50.0		91.6	70-130			
1,1,2-Trichloroethane	46.7	5.00	ug/L	50.0		93.4	70-130			
1,1,1-Trichloroethane	43.8	5.00	ug/L	50.0		87.5	70-130			
Trichloroethene	50.9	5.00	ug/L	50.0		102	65-135			
Trichlorofluoromethane (Freon 11)	52.3	5.00	ug/L	50.0		105	50-150			
Vinyl chloride	54.2	5.00	ug/L	50.0		108	5-195			
m,p-Xylene	98.5	10.0	ug/L	100		98.5	77.1-129			
o-Xylene	46.8	5.00	ug/L	50.0		93.5	78.8-126			
Vinyl acetate	60.3	5.00	ug/L	50.0		121	60-140			
Surrogate: 1,2-Dichloroethane-d4	*40.8*		ug/L	*50.0*		*81.6*	*70-130*			
Surrogate: Toluene-d8	*48.0*		ug/L	*50.0*		*96.1*	*70-130*			
Surrogate: Pentafluorobenzene	*52.0*		ug/L	*50.0*		*104*	*70-130*			
Matrix Spike (DE10351-MS1)	**Source: D1D2545-08**			Prepared & Analyzed: 05/04/2021						
Acetone	40.8	10.0	ug/L	50.0	ND	81.6	0-200			
Acrylonitrile	53.3	20.0	ug/L	50.0	ND	107	40-160			
Benzene	48.8	5.00	ug/L	50.0	ND	97.6	37-151			
Bromodichloromethane	44.8	5.00	ug/L	50.0	ND	89.5	35-155			
Bromoform	47.3	5.00	ug/L	50.0	ND	94.5	45-169			
Bromomethane	52.1	5.00	ug/L	50.0	ND	104	1-242			
2-Butanone (MEK)	51.2	10.0	ug/L	50.0	ND	102	0-200			
Carbon disulfide	52.1	5.00	ug/L	50.0	ND	104	0-200			
Carbon tetrachloride	52.1	5.00	ug/L	50.0	ND	104	70-140			
Chlorobenzene	45.9	5.00	ug/L	50.0	ND	91.9	37-160			
Chloroethane (Ethyl chloride)	33.6	5.00	ug/L	50.0	ND	67.1	14-230			
Chloroform	46.8	4.00	ug/L	50.0	ND	93.6	51-138			
Chloromethane	56.2	5.00	ug/L	50.0	ND	112	1-273			
Dibromochloromethane	49.4	5.00	ug/L	50.0	ND	98.7	53-149			
Dibromomethane (Methylene bromide)	43.5	5.00	ug/L	50.0	ND	87.1	0-200			
1,2-Dichlorobenzene	45.5	5.00	ug/L	50.0	ND	91.1	18-190			
1,3-Dichlorobenzene	46.2	5.00	ug/L	50.0	ND	92.4	59-156			
1,4-Dichlorobenzene	44.0	5.00	ug/L	50.0	ND	88.0	18-190			
Dichlorodifluoromethane (Freon-12)	49.2	5.00	ug/L	50.0	ND	98.5	0-200			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DE10351 - 624.1 - EPA 624.1										
Matrix Spike (DE10351-MS1)	**Source: D1D2545-08**		Prepared & Analyzed: 05/04/2021							
1,2-Dichloroethane	44.7	5.00	ug/L	50.0	ND	89.4	49-155			
1,1-Dichloroethane	47.8	5.00	ug/L	50.0	ND	95.5	59-155			
cis-1,2-Dichloroethene	47.1	5.00	ug/L	50.0	ND	94.2	0-200			
1,1-Dichloroethene	57.9	5.00	ug/L	50.0	ND	116	1-234			
trans-1,2-Dichloroethene	57.6	4.00	ug/L	50.0	ND	115	54-156			
1,2-Dichloropropane	51.2	5.00	ug/L	50.0	ND	102	1-210			
cis-1,3-Dichloropropene	48.1	5.00	ug/L	50.0	ND	96.1	1-227			
trans-1,3-Dichloropropene	42.8	5.00	ug/L	50.0	ND	85.6	17-183			
Ethylbenzene	45.1	5.00	ug/L	50.0	ND	90.3	37-162			
2-Hexanone (MBK)	54.0	10.0	ug/L	50.0	ND	108	0-200			
Methyl tert-butyl ether (MTBE)	46.0	5.00	ug/L	50.0	ND	91.9	0-200			
Methylene chloride (Dichloromethane)	48.9	1.00	ug/L	50.0	ND	97.8	1-221			
4-Methyl-2-pentanone (MIBK)	54.0	10.0	ug/L	50.0	ND	108	0-200			
Styrene	44.2	5.00	ug/L	50.0	ND	88.3	0-200			
1,1,2,2-Tetrachloroethane	45.0	5.00	ug/L	50.0	ND	90.1	46-157			
Tetrachloroethene	50.9	5.00	ug/L	50.0	ND	102	64-148			
Toluene	46.0	5.00	ug/L	50.0	ND	91.9	47-150			
1,1,2-Trichloroethane	47.1	5.00	ug/L	50.0	ND	94.1	52-150			
1,1,1-Trichloroethane	48.3	5.00	ug/L	50.0	ND	96.5	52-162			
Trichloroethene	50.8	5.00	ug/L	50.0	ND	102	70-157			
Trichlorofluoromethane (Freon 11)	61.2	5.00	ug/L	50.0	ND	122	17-181			
Vinyl chloride	62.6	5.00	ug/L	50.0	ND	125	1-251			
m,p-Xylene	97.7	10.0	ug/L	100	ND	97.7	0-200			
o-Xylene	46.8	5.00	ug/L	50.0	ND	93.6	0-200			
Vinyl acetate	63.1	5.00	ug/L	50.0	ND	126	60-140			
Surrogate: 1,2-Dichloroethane-d4	*42.5*		ug/L	*50.0*		*85.1*	*70-130*			
Surrogate: Toluene-d8	*48.3*		ug/L	*50.0*		*96.5*	*70-130*			
Surrogate: Pentafluorobenzene	*53.1*		ug/L	*50.0*		*106*	*70-130*			
Matrix Spike Dup (DE10351-MSD1)	**Source: D1D2545-08**		Prepared & Analyzed: 05/04/2021							
Acetone	41.1	10.0	ug/L	50.0	ND	82.2	0-200	0.732	200	
Acrylonitrile	55.5	20.0	ug/L	50.0	ND	111	40-160	4.14	60	
Benzene	48.3	5.00	ug/L	50.0	ND	96.6	37-151	1.07	61	
Bromodichloromethane	45.8	5.00	ug/L	50.0	ND	91.6	35-155	2.23	56	
Bromoform	51.1	5.00	ug/L	50.0	ND	102	45-169	7.89	42	
Bromomethane	49.2	5.00	ug/L	50.0	ND	98.4	1-242	5.73	61	
2-Butanone (MEK)	50.2	10.0	ug/L	50.0	ND	100	0-200	1.99	200	
Carbon disulfide	48.7	5.00	ug/L	50.0	ND	97.4	0-200	6.74	200	
Carbon tetrachloride	52.1	5.00	ug/L	50.0	ND	104	70-140	0.0384	41	
Chlorobenzene	47.3	5.00	ug/L	50.0	ND	94.6	37-160	2.92	53	
Chloroethane (Ethyl chloride)	30.3	5.00	ug/L	50.0	ND	60.6	14-230	10.3	78	
Chloroform	47.9	4.00	ug/L	50.0	ND	95.7	51-138	2.22	54	
Chloromethane	52.3	5.00	ug/L	50.0	ND	105	1-273	7.32	60	

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DE10351 - 624.1 - EPA 624.1										
Matrix Spike Dup (DE10351-MSD1)	**Source: D1D2545-08**		Prepared & Analyzed: 05/04/2021							
Dibromochloromethane	52.7	5.00	ug/L	50.0	ND	105	53-149	6.49	50	
Dibromomethane (Methylene bromide)	46.0	5.00	ug/L	50.0	ND	91.9	0-200	5.45	200	
1,2-Dichlorobenzene	49.4	5.00	ug/L	50.0	ND	98.7	18-190	8.05	57	
1,3-Dichlorobenzene	48.3	5.00	ug/L	50.0	ND	96.7	59-156	4.53	43	
1,4-Dichlorobenzene	46.7	5.00	ug/L	50.0	ND	93.5	18-190	6.08	57	
Dichlorodifluoromethane (Freon-12)	45.4	5.00	ug/L	50.0	ND	90.9	0-200	8.03	200	
1,2-Dichloroethane	46.1	5.00	ug/L	50.0	ND	92.2	49-155	3.04	49	
1,1-Dichloroethane	47.9	5.00	ug/L	50.0	ND	95.9	59-155	0.376	40	
cis-1,2-Dichloroethene	48.2	5.00	ug/L	50.0	ND	96.3	0-200	2.27	200	
1,1-Dichloroethene	55.7	5.00	ug/L	50.0	ND	111	1-234	3.89	32	
trans-1,2-Dichloroethene	57.9	4.00	ug/L	50.0	ND	116	54-156	0.641	45	
1,2-Dichloropropane	50.5	5.00	ug/L	50.0	ND	101	1-210	1.40	55	
cis-1,3-Dichloropropene	51.7	5.00	ug/L	50.0	ND	103	1-227	7.24	58	
trans-1,3-Dichloropropene	45.3	5.00	ug/L	50.0	ND	90.6	17-183	5.70	86	
Ethylbenzene	46.4	5.00	ug/L	50.0	ND	92.8	37-162	2.75	63	
2-Hexanone (MBK)	55.8	10.0	ug/L	50.0	ND	112	0-200	3.21	200	
Methyl tert-butyl ether (MTBE)	46.7	5.00	ug/L	50.0	ND	93.4	0-200	1.66	200	
Methylene chloride (Dichloromethane)	50.0	1.00	ug/L	50.0	ND	99.9	1-221	2.14	28	
4-Methyl-2-pentanone (MIBK)	55.3	10.0	ug/L	50.0	ND	111	0-200	2.42	200	
Styrene	46.6	5.00	ug/L	50.0	ND	93.2	0-200	5.35	200	
1,1,2,2-Tetrachloroethane	49.1	5.00	ug/L	50.0	ND	98.1	46-157	8.52	61	
Tetrachloroethene	51.6	5.00	ug/L	50.0	ND	103	64-148	1.33	39	
Toluene	49.1	5.00	ug/L	50.0	ND	98.2	47-150	6.63	41	
1,1,2-Trichloroethane	49.8	5.00	ug/L	50.0	ND	99.6	52-150	5.72	45	
1,1,1-Trichloroethane	47.5	5.00	ug/L	50.0	ND	95.0	52-162	1.55	36	
Trichloroethene	52.7	5.00	ug/L	50.0	ND	105	70-157	3.73	48	
Trichlorofluoromethane (Freon 11)	58.1	5.00	ug/L	50.0	ND	116	17-181	5.13	84	
Vinyl chloride	57.3	5.00	ug/L	50.0	ND	115	1-251	8.81	66	
m,p-Xylene	100	10.0	ug/L	100	ND	100	0-200	2.51	200	
o-Xylene	48.9	5.00	ug/L	50.0	ND	97.8	0-200	4.35	200	
Vinyl acetate	62.6	5.00	ug/L	50.0	ND	125	60-140	0.828	25	
Surrogate: 1,2-Dichloroethane-d4	*42.4*		ug/L	*50.0*		*84.7*	*70-130*			
Surrogate: Toluene-d8	*48.8*		ug/L	*50.0*		*97.6*	*70-130*			
Surrogate: Pentafluorobenzene	*53.8*		ug/L	*50.0*		*108*	*70-130*			

MICROBAC®

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1D2545

Definitions

A5:	Sample was filtered (0.45 um) before analysis.
MCL:	US EPA Maximum Contaminant Level
mg CaCO3/L	Milligrams Calcium Carbonate per Liter
mg/L:	Milligrams per Liter
R3:	Duplicate RPD is outside of acceptance criteria. The difference between the results is less than 2x Method Reporting Limit.
RL:	Reporting Limit
RPD:	Relative Percent Difference
ug/L:	Micrograms per Liter
Y1:	Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.9°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008	Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Melisa L. Montgomery
Quality Assurance Officer
Reported: 05/07/2021 16:15

MICROBAC

Microbac Laboratories, Inc.

D1D2545

W & C - Plymouth

FOR LAB USE ONLY

Lab WO#

Project Manager

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

DELIVERY: ROBERT BLANCHARD

E-MAIL: [redacted]

PHONE: 508-830-4159 FAX: 508-732-0238

BILL TO: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

PURCHASE ORDER #

ATTENTION: ACCOUNTS PAYABLE

PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP

LOCATION: ID 11773

WELLS - QUARTERLY

ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL

ROBERT SCOTT

PHONE: CELL - 860-204-7988

FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # 6D (250 mL)	4/27/2021	9:33		X	WW	1	X	X											X			
Well # 6D (250 mL)	4/27/2021	9:33		X	WW	1			X	X								X				
Well # 6D (250 mL)(filtered)	4/27/2021	9:33		X	WW	1					X							X				
Well # 6D (250 mL)	4/27/2021	9:33		X	WW	1						X						X				
Well # 6D (250 mL)	4/27/2021	9:33		X	WW	1							X					X				
Well # 6D (250 mL)	4/27/2021	9:33		X	WW	1								X	X	X					X	
Well # 6D (40 mL vial)	4/27/2021	9:33		X	WW	2											X	X				
Well # 6D (40 mL vial)	4/27/2021	9:33		X	WW	3											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	4-27-21	
RECEIVED:		
RELINQUISHED:	4/27/21	1341
RECEIVED:	4/27/21	1341
RELINQUISHED:	4/27/21	1620
RECEIVED:	4/27/21	1690

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

VERIFIED [redacted]

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☒ AMBIENT ☐ 3.9°C

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1D2548

Project Description

Wells - Quarterly

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Monday, May 10, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request . This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1D2548

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Quarterly

Project / PO Number: 346346
Received: 04/27/2021
Reported: 05/10/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well 6S	D1D2548-01	Groundwater	Grab		04/27/21 08:46	04/27/21 16:20
Well 6S	D1D2548-02	Groundwater	Grab		04/27/21 08:46	04/27/21 16:20
Well 6S (filtered)	D1D2548-03	Groundwater	Grab		04/27/21 08:46	04/27/21 16:20
Well 6S	D1D2548-04	Groundwater	Grab		04/27/21 08:46	04/27/21 16:20
Well 6S	D1D2548-05	Groundwater	Grab		04/27/21 08:46	04/27/21 16:20
Well 6S	D1D2548-06	Groundwater	Grab		04/27/21 08:46	04/27/21 16:20
Well 6S	D1D2548-07	Groundwater	Grab		04/27/21 08:46	04/27/21 16:20
Well 6S	D1D2548-08	Groundwater	Grab		04/27/21 08:46	04/27/21 16:20

CERTIFICATE OF ANALYSIS

D1D2548

Analytical Testing Parameters

Client Sample ID: Well 6S
Sample Matrix: Groundwater
Lab Sample ID: D1D2548-01
Collected By: Customer
Collection Date: 04/27/2021 8:46

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 351.1								
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L	1		04/29/21 0933	04/29/21 1541	CLW
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0213**	0.0106	mg/L	1		04/28/21 1900	04/29/21 1138	CLW

Client Sample ID: Well 6S
Sample Matrix: Groundwater
Lab Sample ID: D1D2548-02
Collected By: Customer
Collection Date: 04/27/2021 8:46

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-NO_3^- F-2011								
Nitrate as N	**1.38**	0.0500	mg/L	1			04/27/21 1837	DJM
Nitrite as N	<0.0100	0.0100	mg/L	1	**Y1**		04/27/21 1837	DJM

Client Sample ID: Well 6S (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1D2548-03
Collected By: Customer
Collection Date: 04/27/2021 8:46

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0120**	0.0100	mg/L	1		04/27/21 1832	04/27/21 2041	DJM

Client Sample ID: Well 6S
Sample Matrix: Groundwater
Lab Sample ID: D1D2548-04
Collected By: Customer
Collection Date: 04/27/2021 8:46

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 2320 B-2011								
Alkalinity to pH 4.5	**4.00**	1.00	mg CaCO3/L	1			04/29/21 1500	SRF

Client Sample ID: Well 6S
Sample Matrix: Groundwater
Lab Sample ID: D1D2548-05
Collected By: Customer
Collection Date: 04/27/2021 8:46

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-Cl E-2011								
Chloride	**26.6**	2.00	mg/L	1			05/03/21 1151	CLW

CERTIFICATE OF ANALYSIS

D1D2548

Client Sample ID:	Well 6S		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D2548-06	**Collection Date:**	04/27/2021 8:46

Metals Total by ICP	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.7, Rv. 4.4 (1994)								
Boron	**0.0064**	0.0050	mg/L	1	**Y1**	04/29/21 1349	04/30/21 1706	DLO
Copper	<0.0020	0.0020	mg/L	1		04/29/21 1349	04/30/21 1706	DLO
Sodium	**13.5**	1.00	mg/L	1		04/29/21 1349	04/30/21 1706	DLO

Client Sample ID:	Well 6S		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D2548-07	**Collection Date:**	04/27/2021 8:46

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acrolein	<20.0	20.0	ug/L	1			04/29/21 1721	JAN
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	1			04/29/21 1721	JAN
Surrogate: 1,2-Dichloroethane-d4	96.5	Limit: 70-130	% Rec	1			04/29/21 1721	JAN
Surrogate: Toluene-d8	105	Limit: 70-130	% Rec	1			04/29/21 1721	JAN
Surrogate: Pentafluorobenzene	99.6	Limit: 70-130	% Rec	1			04/29/21 1721	JAN

CERTIFICATE OF ANALYSIS

D1D2548

Client Sample ID:	Well 6S		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D2548-08	**Collection Date:**	04/27/2021 8:46

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acetone	<10.0	10.0	ug/L	1	**Y1**		05/05/21 1509	RSD
Acrylonitrile	<20.0	20.0	ug/L	1			05/05/21 1509	RSD
Benzene	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
Bromodichloromethane	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
Bromoform	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
Bromomethane	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
2-Butanone (MEK)	<10.0	10.0	ug/L	1	**Y1**		05/05/21 1509	RSD
Carbon disulfide	<5.00	5.00	ug/L	1	**Y1**		05/05/21 1509	RSD
Carbon tetrachloride	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
Chlorobenzene	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
Chloroform	<4.00	4.00	ug/L	1			05/05/21 1509	RSD
Chloromethane	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
Dibromochloromethane	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L	1	**Y1**		05/05/21 1509	RSD
1,2-Dichlorobenzene	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
1,3-Dichlorobenzene	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
1,4-Dichlorobenzene	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L	1	**Y1**		05/05/21 1509	RSD
1,2-Dichloroethane	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
1,1-Dichloroethane	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
cis-1,2-Dichloroethene	<5.00	5.00	ug/L	1	**Y1**		05/05/21 1509	RSD
1,1-Dichloroethene	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
trans-1,2-Dichloroethene	<4.00	4.00	ug/L	1			05/05/21 1509	RSD
1,2-Dichloropropane	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
cis-1,3-Dichloropropene	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
trans-1,3-Dichloropropene	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
Ethylbenzene	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
2-Hexanone (MBK)	<10.0	10.0	ug/L	1	**Y1**		05/05/21 1509	RSD
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L	1	**Y1**		05/05/21 1509	RSD
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L	1			05/05/21 1509	RSD
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L	1	**Y1**		05/05/21 1509	RSD
Styrene	<5.00	5.00	ug/L	1	**Y1**		05/05/21 1509	RSD
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
Tetrachloroethene	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
Toluene	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
1,1,2-Trichloroethane	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
1,1,1-Trichloroethane	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
Trichloroethene	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
Vinyl chloride	<5.00	5.00	ug/L	1			05/05/21 1509	RSD
m,p-Xylene	<10.0	10.0	ug/L	1	**Y1**		05/05/21 1509	RSD

CERTIFICATE OF ANALYSIS

D1D2548

Client Sample ID:	Well 6S		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D2548-08	**Collection Date:**	04/27/2021 8:46

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
o-Xylene	<5.00	5.00	ug/L	1	**Y1**		05/05/21 1509	RSD
Vinyl acetate	<5.00	5.00	ug/L	1	**Y1**		05/05/21 1509	RSD
Surrogate: 1,2-Dichloroethane-d4	90.2	Limit: 70-130	% Rec	1			05/05/21 1509	RSD
Surrogate: Toluene-d8	99.5	Limit: 70-130	% Rec	1			05/05/21 1509	RSD
Surrogate: Pentafluorobenzene	104	Limit: 70-130	% Rec	1			05/05/21 1509	RSD

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-NO_3^- F-2011	DD11737	DD11737-DUP1	D1D2495-02
		DD11737-DUP1	D1D2495-02
		DD11737-MS1	D1D2495-02
		DD11737-MS1	D1D2495-02
		DD11737-MSD1	D1D2495-02
		DD11737-MSD1	D1D2495-02
		DD11737-BS1	
		DD11737-BS2	
		DD11737-BLK1	
		DD11737-BLK1	
		D1D2548-02	Well 6S
		D1D2548-02	Well 6S

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DD11775	DD11775-BS1	
		DD11775-BLK1	
		DD11775-MS1	D1D2545-03
		DD11775-DUP1	D1D2545-03
		D1D2548-03	Well 6S (filtered)
		DD11775-MS2	D1D2548-03

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DD11849	DD11849-BS1	
		DD11849-BLK1	
		DD11849-MS2	L1D0529-01
		D1D2548-01	Well 6S
		DD11849-DUP1	L1D0510-02
		DD11849-MS1	L1D0510-02

Method	Batch	Laboratory ID	Client / Source ID
EPA 351.1	DD11879	DD11879-BS1	
		DD11879-BLK1	
		DD11879-DUP1	D1D2505-08
		DD11879-MS1	D1D2505-08
		DD11879-MS2	D1D2507-08
		D1D2548-01	Well 6S

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.7, Rv. 4.4 (1994)	DD11894	DD11894-BLK1	
		DD11894-BS1	
		DD11894-DUP1	D1D2619-02

EPA 200.7, Rv. 4.4 (1994)	DD11894	DD11894-MS1	D1D2487-01
		D1D2548-06	Well 6S
		D1D2548-06	Well 6S

Method	Batch	Laboratory ID	Client / Source ID
SM 2320 B-2011	DD11941	DD11941-DUP1	D1D2611-03
		DD11941-BS1	
		DD11941-BLK1	
		D1D2548-04	Well 6S

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-Cl E-2011	DE10004	DE10004-BS1	
		DE10004-BLK1	
		D1D2548-05	Well 6S
		DE10004-DUP1	D1D2548-05
		DE10004-MS1	D1D2548-05
		DE10004-MSD1	D1D2548-05

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DE10010	D1D2548-07	Well 6S

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DE10436	DE10436-BS1	
		DE10436-BS2	
		DE10436-BLK1	
		D1D2548-08	Well 6S
		DE10436-MS1	D1D2748-07
		DE10436-MSD1	D1D2748-07

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11737 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Blank (DD11737-BLK1)			Prepared & Analyzed: 04/27/2021							
Nitrite as N	<0.0100	0.0100	mg/L							
Nitrate as N	<0.0500	0.0500	mg/L							
LCS (DD11737-BS1)			Prepared & Analyzed: 04/27/2021							
Nitrate as N	5.16	0.0500	mg/L	5.00		103	90-110			
LCS (DD11737-BS2)			Prepared & Analyzed: 04/27/2021							
Nitrite as N	1.00	0.0100	mg/L	1.00		100	90-110			
Duplicate (DD11737-DUP1)	**Source: D1D2495-02**		Prepared & Analyzed: 04/27/2021							
Nitrite as N	0.523	0.0100	mg/L		0.534			2.12	20	A5
Nitrate as N	<0.0500	0.0500	mg/L		ND				20	A5
Matrix Spike (DD11737-MS1)	**Source: D1D2495-02**		Prepared & Analyzed: 04/27/2021							

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11737 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Matrix Spike (DD11737-MS1)		**Source: D1D2495-02**		Prepared & Analyzed: 04/27/2021						
Nitrite as N	1.52	0.0100	mg/L	1.00	0.534	98.4	75-125			A5
Nitrate as N	5.16	0.0500	mg/L	5.00	ND	103	75-125			A5
Matrix Spike Dup (DD11737-MSD1)		**Source: D1D2495-02**		Prepared & Analyzed: 04/27/2021						
Nitrite as N	1.52	0.0100	mg/L	1.00	0.534	98.9	75-125	0.368	20	A5
Nitrate as N	5.05	0.0500	mg/L	5.00	ND	101	75-125	2.07	20	A5
Batch DD11775 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DD11775-BLK1)				Prepared & Analyzed: 04/27/2021						
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DD11775-BS1)				Prepared & Analyzed: 04/27/2021						
Ortho-phosphate as P	1.01	0.0100	mg/L	1.00		101	90-110			
Duplicate (DD11775-DUP1)		**Source: D1D2545-03**		Prepared & Analyzed: 04/27/2021						
Ortho-phosphate as P	0.0200	0.0100	mg/L		0.0250			22.2	20	R3
Matrix Spike (DD11775-MS1)		**Source: D1D2545-03**		Prepared & Analyzed: 04/27/2021						
Ortho-phosphate as P	0.951	0.0100	mg/L	1.00	0.0250	92.6	90-110			
Matrix Spike (DD11775-MS2)		**Source: D1D2548-03**		Prepared & Analyzed: 04/27/2021						
Ortho-phosphate as P	0.988	0.0100	mg/L	1.00	0.0120	97.5	90-110			
Batch DD11849 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DD11849-BLK1)				Prepared: 04/28/2021 Analyzed: 04/29/2021						
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DD11849-BS1)				Prepared: 04/28/2021 Analyzed: 04/29/2021						
Phosphorus - Total as P	0.932	0.0106	mg/L	1.00		93.2	90-110			
Duplicate (DD11849-DUP1)		**Source: L1D0510-02**		Prepared: 04/28/2021 Analyzed: 04/29/2021						
Phosphorus - Total as P	2.09	0.0213	mg/L		2.08			0.561	20	
Matrix Spike (DD11849-MS1)		**Source: L1D0510-02**		Prepared: 04/28/2021 Analyzed: 04/29/2021						
Phosphorus - Total as P	3.36	0.0213	mg/L	1.25	2.08	102	90-110			
Matrix Spike (DD11849-MS2)		**Source: L1D0529-01**		Prepared: 04/28/2021 Analyzed: 04/29/2021						
Phosphorus - Total as P	1.22	0.0106	mg/L	1.25	0.0553	92.9	90-110			
Batch DD11879 - Wet-Digestion-W - EPA 351.1										
Blank (DD11879-BLK1)				Prepared & Analyzed: 04/29/2021						
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L							
LCS (DD11879-BS1)				Prepared & Analyzed: 04/29/2021						
Total Kjeldahl Nitrogen (TKN)	5.04	0.200	mg/L	5.00		101	90-110			
Duplicate (DD11879-DUP1)		**Source: D1D2505-08**		Prepared & Analyzed: 04/29/2021						
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L		ND				20	
Matrix Spike (DD11879-MS1)		**Source: D1D2505-08**		Prepared & Analyzed: 04/29/2021						
Total Kjeldahl Nitrogen (TKN)	10.5	0.200	mg/L	10.0	ND	105	90-110			

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11879 - Wet-Digestion-W - EPA 351.1										
Matrix Spike (DD11879-MS2)		**Source: D1D2507-08**	Prepared & Analyzed: 04/29/2021							
Total Kjeldahl Nitrogen (TKN)	16.2	0.200	mg/L	10.0	5.73	105	90-110			
Batch DD11941 - Wet Chem - W - SM 2320 B-2011										
Blank (DD11941-BLK1)			Prepared & Analyzed: 04/29/2021							
Alkalinity to pH 4.5	<1.00	1.00	mg CaCO3/ L							
LCS (DD11941-BS1)			Prepared & Analyzed: 04/29/2021							
Alkalinity to pH 4.5	50.0	1.00	mg CaCO3/ L	50.0		100	90-110			
Duplicate (DD11941-DUP1)		**Source: D1D2611-03**	Prepared & Analyzed: 04/29/2021							
Alkalinity to pH 4.5	133	1.00	mg CaCO3/ L		133			0.00	20	
Batch DE10004 - Wet Chem - W - SM 4500-Cl E-2011										
Blank (DE10004-BLK1)			Prepared & Analyzed: 05/03/2021							
Chloride	<2.00	2.00	mg/L							
LCS (DE10004-BS1)			Prepared & Analyzed: 05/03/2021							
Chloride	19.4	2.00	mg/L	20.0		96.8	90-110			
Duplicate (DE10004-DUP1)		**Source: D1D2548-05**	Prepared & Analyzed: 05/03/2021							
Chloride	27.1	2.00	mg/L		26.6			1.73	20	
Matrix Spike (DE10004-MS1)		**Source: D1D2548-05**	Prepared & Analyzed: 05/03/2021							
Chloride	49.6	2.00	mg/L	20.0	26.6	115	75-125			
Matrix Spike Dup (DE10004-MSD1)		**Source: D1D2548-05**	Prepared & Analyzed: 05/03/2021							
Chloride	48.3	2.00	mg/L	20.0	26.6	108	75-125	2.59	20	

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11894 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DD11894-BLK1)			Prepared: 04/29/2021 Analyzed: 04/30/2021							
Boron	<0.0050	0.0050	mg/L							
Copper	<0.0020	0.0020	mg/L							
Sodium	<1.00	1.00	mg/L							
LCS (DD11894-BS1)			Prepared: 04/29/2021 Analyzed: 04/30/2021							
Boron	0.537	0.0050	mg/L	0.500		107	85-115			
Copper	0.532	0.0020	mg/L	0.500		106	85-115			
Sodium	11.5	1.00	mg/L	10.5		110	85-115			
Duplicate (DD11894-DUP1)		**Source: D1D2619-02**	Prepared: 04/29/2021 Analyzed: 04/30/2021							
Boron	0.0109	0.0050	mg/L		0.0109			0.219	20	
Copper	<0.0020	0.0020	mg/L		ND				20	

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11894 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Duplicate (DD11894-DUP1)		**Source: D1D2619-02**		Prepared: 04/29/2021 Analyzed: 04/30/2021						
Sodium	14.1	1.00	mg/L		14.0			0.864	20	
Matrix Spike (DD11894-MS1)		**Source: D1D2487-01**		Prepared: 04/29/2021 Analyzed: 04/30/2021						
Boron	1.34	0.0050	mg/L	0.500	0.802	107	70-130			
Copper	0.549	0.0020	mg/L	0.500	0.0182	106	70-130			
Sodium	54.4	1.00	mg/L	10.5	43.1	108	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DE10436 - 624.1 - EPA 624.1										
Blank (DE10436-BLK1)				Prepared & Analyzed: 05/05/2021						
Acetone	<10.0	10.0	ug/L							
Acrylonitrile	<20.0	20.0	ug/L							
Benzene	<5.00	5.00	ug/L							
Bromodichloromethane	<5.00	5.00	ug/L							
Bromoform	<5.00	5.00	ug/L							
Bromomethane	<5.00	5.00	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Carbon disulfide	<5.00	5.00	ug/L							
Carbon tetrachloride	<5.00	5.00	ug/L							
Chlorobenzene	<5.00	5.00	ug/L							
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L							
Chloroform	<4.00	4.00	ug/L							
Chloromethane	<5.00	5.00	ug/L							
Dibromochloromethane	<5.00	5.00	ug/L							
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L							
1,2-Dichlorobenzene	<5.00	5.00	ug/L							
1,3-Dichlorobenzene	<5.00	5.00	ug/L							
1,4-Dichlorobenzene	<5.00	5.00	ug/L							
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L							
1,2-Dichloroethane	<5.00	5.00	ug/L							
1,1-Dichloroethane	<5.00	5.00	ug/L							
cis-1,2-Dichloroethene	<5.00	5.00	ug/L							
1,1-Dichloroethene	<5.00	5.00	ug/L							
trans-1,2-Dichloroethene	<4.00	4.00	ug/L							
1,2-Dichloropropane	<5.00	5.00	ug/L							
cis-1,3-Dichloropropene	<5.00	5.00	ug/L							
trans-1,3-Dichloropropene	<5.00	5.00	ug/L							
Ethylbenzene	<5.00	5.00	ug/L							
2-Hexanone (MBK)	<10.0	10.0	ug/L							
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L							
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DE10436 - 624.1 - EPA 624.1										
Blank (DE10436-BLK1)			Prepared & Analyzed: 05/05/2021							
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L							
Styrene	<5.00	5.00	ug/L							
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L							
Tetrachloroethene	<5.00	5.00	ug/L							
Toluene	<5.00	5.00	ug/L							
1,1,2-Trichloroethane	<5.00	5.00	ug/L							
1,1,1-Trichloroethane	<5.00	5.00	ug/L							
Trichloroethene	<5.00	5.00	ug/L							
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L							
Vinyl chloride	<5.00	5.00	ug/L							
m,p-Xylene	<10.0	10.0	ug/L							
o-Xylene	<5.00	5.00	ug/L							
Vinyl acetate	<5.00	5.00	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*44.2*		ug/L	*50.0*		*88.3*	*70-130*			
Surrogate: Toluene-d8	*49.5*		ug/L	*50.0*		*99.0*	*70-130*			
LCS (DE10436-BS1)			Prepared & Analyzed: 05/05/2021							
Acetone	46.1	10.0	ug/L	50.0		92.1	42.1-136			
Acrylonitrile	58.6	20.0	ug/L	50.0		117	60-140			
Benzene	51.2	5.00	ug/L	50.0		102	65-135			
Bromodichloromethane	48.4	5.00	ug/L	50.0		96.8	65-135			
Bromoform	52.4	5.00	ug/L	50.0		105	70-130			
Bromomethane	49.9	5.00	ug/L	50.0		99.9	15-185			
2-Butanone (MEK)	61.5	10.0	ug/L	50.0		123	63.1-143			
Carbon disulfide	50.0	5.00	ug/L	50.0		100	63.5-124			
Carbon tetrachloride	53.0	5.00	ug/L	50.0		106	70-130			
Chlorobenzene	48.8	5.00	ug/L	50.0		97.6	65-135			
Chloroethane (Ethyl chloride)	28.9	5.00	ug/L	50.0		57.7	40-160			
Chloroform	49.0	4.00	ug/L	50.0		98.0	70-135			
Chloromethane	53.6	5.00	ug/L	50.0		107	1-205			
Dibromochloromethane	53.0	5.00	ug/L	50.0		106	70-135			
Dibromomethane (Methylene bromide)	46.9	5.00	ug/L	50.0		93.9	73.8-124			
1,2-Dichlorobenzene	49.6	5.00	ug/L	50.0		99.2	65-135			
1,3-Dichlorobenzene	49.9	5.00	ug/L	50.0		99.8	70-130			
1,4-Dichlorobenzene	47.7	5.00	ug/L	50.0		95.5	65-135			
Dichlorodifluoromethane (Freon-12)	46.7	5.00	ug/L	50.0		93.4	34.7-129			
1,2-Dichloroethane	47.4	5.00	ug/L	50.0		94.9	70-130			
1,1-Dichloroethane	49.9	5.00	ug/L	50.0		99.8	70-130			
cis-1,2-Dichloroethene	49.0	5.00	ug/L	50.0		97.9	75.5-125			
1,1-Dichloroethene	56.5	5.00	ug/L	50.0		113	50-150			
trans-1,2-Dichloroethene	58.1	4.00	ug/L	50.0		116	70-130			
1,2-Dichloropropane	53.2	5.00	ug/L	50.0		106	35-165			
cis-1,3-Dichloropropene	52.8	5.00	ug/L	50.0		106	25-175			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DE10436 - 624.1 - EPA 624.1										
LCS (DE10436-BS1)				Prepared & Analyzed: 05/05/2021						
trans-1,3-Dichloropropene	46.9	5.00	ug/L	50.0		93.8	50-150			
Ethylbenzene	47.4	5.00	ug/L	50.0		94.9	60-140			
2-Hexanone (MBK)	59.4	10.0	ug/L	50.0		119	73.6-130			
Methyl tert-butyl ether (MTBE)	51.0	5.00	ug/L	50.0		102	69-151			
Methylene chloride (Dichloromethane)	52.8	1.00	ug/L	50.0		106	60-140			
4-Methyl-2-pentanone (MIBK)	58.7	10.0	ug/L	50.0		117	72.5-129			
Styrene	48.4	5.00	ug/L	50.0		96.8	79.2-127			
1,1,2,2-Tetrachloroethane	44.9	5.00	ug/L	50.0		89.7	60-140			
Tetrachloroethene	54.0	5.00	ug/L	50.0		108	70-130			
Toluene	49.0	5.00	ug/L	50.0		98.0	70-130			
1,1,2-Trichloroethane	51.4	5.00	ug/L	50.0		103	70-130			
1,1,1-Trichloroethane	49.8	5.00	ug/L	50.0		99.6	70-130			
Trichloroethene	60.1	5.00	ug/L	50.0		120	65-135			
Vinyl chloride	57.5	5.00	ug/L	50.0		115	5-195			
m,p-Xylene	103	10.0	ug/L	100		103	77.1-129			
o-Xylene	49.5	5.00	ug/L	50.0		99.0	78.8-126			
Vinyl acetate	41.3	5.00	ug/L	50.0		82.6	60-140			
Surrogate: 1,2-Dichloroethane-d4	*42.2*		ug/L	*50.0*		*84.4*	*70-130*			
Surrogate: Toluene-d8	*48.3*		ug/L	*50.0*		*96.6*	*70-130*			
Surrogate: Pentafluorobenzene	*53.4*		ug/L	*50.0*		*107*	*70-130*			
LCS (DE10436-BS2)				Prepared & Analyzed: 05/05/2021						
Trichlorofluoromethane (Freon 11)	48.0	5.00	ug/L	50.0		96.0	50-150			
Surrogate: 1,2-Dichloroethane-d4	*41.6*		ug/L	*50.0*		*83.1*	*70-130*			
Surrogate: Toluene-d8	*48.5*		ug/L	*50.0*		*97.0*	*70-130*			
Surrogate: Pentafluorobenzene	*53.5*		ug/L	*50.0*		*107*	*70-130*			
Matrix Spike (DE10436-MS1)	**Source: D1D2748-07**			Prepared & Analyzed: 05/05/2021						
Acetone	43.2	10.0	ug/L	50.0	7.34	71.7	0-200			
Acrylonitrile	60.5	20.0	ug/L	50.0	ND	121	40-160			
Benzene	58.0	5.00	ug/L	50.0	ND	116	37-151			
Bromodichloromethane	53.0	5.00	ug/L	50.0	ND	106	35-155			
Bromoform	57.1	5.00	ug/L	50.0	ND	114	45-169			
Bromomethane	50.6	5.00	ug/L	50.0	ND	101	1-242			
2-Butanone (MEK)	54.4	10.0	ug/L	50.0	1.44	106	0-200			
Carbon disulfide	59.3	5.00	ug/L	50.0	ND	119	0-200			
Carbon tetrachloride	64.8	5.00	ug/L	50.0	ND	130	70-140			
Chlorobenzene	54.5	5.00	ug/L	50.0	ND	109	37-160			
Chloroethane (Ethyl chloride)	24.8	5.00	ug/L	50.0	ND	49.6	14-230			
Chloroform	53.6	4.00	ug/L	50.0	ND	107	51-138			
Chloromethane	55.2	5.00	ug/L	50.0	ND	110	1-273			
Dibromochloromethane	58.6	5.00	ug/L	50.0	ND	117	53-149			
Dibromomethane (Methylene bromide)	52.0	5.00	ug/L	50.0	ND	104	0-200			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DE10436 - 624.1 - EPA 624.1										
Matrix Spike (DE10436-MS1)	**Source: D1D2748-07**		Prepared & Analyzed: 05/05/2021							
1,2-Dichlorobenzene	56.5	5.00	ug/L	50.0	ND	113	18-190			
1,3-Dichlorobenzene	58.1	5.00	ug/L	50.0	ND	116	59-156			
1,4-Dichlorobenzene	55.1	5.00	ug/L	50.0	ND	110	18-190			
Dichlorodifluoromethane (Freon-12)	56.1	5.00	ug/L	50.0	ND	112	0-200			
1,2-Dichloroethane	51.5	5.00	ug/L	50.0	ND	103	49-155			
1,1-Dichloroethane	56.4	5.00	ug/L	50.0	ND	113	59-155			
cis-1,2-Dichloroethene	56.2	5.00	ug/L	50.0	ND	112	0-200			
1,1-Dichloroethene	67.8	5.00	ug/L	50.0	ND	136	1-234			
trans-1,2-Dichloroethene	67.2	4.00	ug/L	50.0	ND	134	54-156			
1,2-Dichloropropane	59.3	5.00	ug/L	50.0	ND	119	1-210			
cis-1,3-Dichloropropene	57.6	5.00	ug/L	50.0	ND	115	1-227			
trans-1,3-Dichloropropene	49.8	5.00	ug/L	50.0	ND	99.5	17-183			
Ethylbenzene	55.2	5.00	ug/L	50.0	ND	110	37-162			
2-Hexanone (MBK)	59.7	10.0	ug/L	50.0	ND	119	0-200			
Methyl tert-butyl ether (MTBE)	54.0	5.00	ug/L	50.0	ND	108	0-200			
Methylene chloride (Dichloromethane)	57.1	1.00	ug/L	50.0	ND	114	1-221			
4-Methyl-2-pentanone (MIBK)	60.8	10.0	ug/L	50.0	ND	122	0-200			
Styrene	53.9	5.00	ug/L	50.0	ND	108	0-200			
1,1,2,2-Tetrachloroethane	53.1	5.00	ug/L	50.0	ND	106	46-157			
Tetrachloroethene	63.3	5.00	ug/L	50.0	ND	127	64-148			
Toluene	54.8	5.00	ug/L	50.0	ND	110	47-150			
1,1,2-Trichloroethane	55.4	5.00	ug/L	50.0	ND	111	52-150			
1,1,1-Trichloroethane	58.2	5.00	ug/L	50.0	ND	116	52-162			
Trichloroethene	64.1	5.00	ug/L	50.0	ND	128	70-157			
Trichlorofluoromethane (Freon 11)	71.5	5.00	ug/L	50.0	ND	143	17-181			
Vinyl chloride	63.0	5.00	ug/L	50.0	ND	126	1-251			
m,p-Xylene	122	10.0	ug/L	100	ND	122	0-200			
o-Xylene	56.4	5.00	ug/L	50.0	ND	113	0-200			
Vinyl acetate	57.3	5.00	ug/L	50.0	ND	115	60-140			
Surrogate: 1,2-Dichloroethane-d4	*42.9*		ug/L	*50.0*		*85.9*	*70-130*			
Surrogate: Toluene-d8	*47.6*		ug/L	*50.0*		*95.2*	*70-130*			
Surrogate: Pentafluorobenzene	*55.2*		ug/L	*50.0*		*110*	*70-130*			
Matrix Spike Dup (DE10436-MSD1)	**Source: D1D2748-07**		Prepared & Analyzed: 05/05/2021							
Acetone	46.7	10.0	ug/L	50.0	7.34	78.8	0-200	7.85	200	
Acrylonitrile	61.1	20.0	ug/L	50.0	ND	122	40-160	0.938	60	
Benzene	57.4	5.00	ug/L	50.0	ND	115	37-151	1.14	61	
Bromodichloromethane	53.1	5.00	ug/L	50.0	ND	106	35-155	0.0566	56	
Bromoform	58.2	5.00	ug/L	50.0	ND	116	45-169	1.96	42	
Bromomethane	54.8	5.00	ug/L	50.0	ND	110	1-242	8.14	61	
2-Butanone (MEK)	56.7	10.0	ug/L	50.0	1.44	111	0-200	4.12	200	
Carbon disulfide	58.2	5.00	ug/L	50.0	ND	116	0-200	1.79	200	
Carbon tetrachloride	65.3	5.00	ug/L	50.0	ND	131	70-140	0.784	41	

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DE10436 - 624.1 - EPA 624.1										
Matrix Spike Dup (DE10436-MSD1)	**Source: D1D2748-07**		Prepared & Analyzed: 05/05/2021							
Chlorobenzene	55.6	5.00	ug/L	50.0	ND	111	37-160	1.98	53	
Chloroethane (Ethyl chloride)	25.9	5.00	ug/L	50.0	ND	51.9	14-230	4.49	78	
Chloroform	54.1	4.00	ug/L	50.0	ND	108	51-138	0.910	54	
Chloromethane	55.7	5.00	ug/L	50.0	ND	111	1-273	0.848	60	
Dibromochloromethane	61.0	5.00	ug/L	50.0	ND	122	53-149	4.06	50	
Dibromomethane (Methylene bromide)	52.1	5.00	ug/L	50.0	ND	104	0-200	0.212	200	
1,2-Dichlorobenzene	56.8	5.00	ug/L	50.0	ND	114	18-190	0.636	57	
1,3-Dichlorobenzene	58.0	5.00	ug/L	50.0	ND	116	59-156	0.207	43	
1,4-Dichlorobenzene	54.8	5.00	ug/L	50.0	ND	110	18-190	0.582	57	
Dichlorodifluoromethane (Freon-12)	53.6	5.00	ug/L	50.0	ND	107	0-200	4.67	200	
1,2-Dichloroethane	53.8	5.00	ug/L	50.0	ND	108	49-155	4.42	49	
1,1-Dichloroethane	56.4	5.00	ug/L	50.0	ND	113	59-155	0.0887	40	
cis-1,2-Dichloroethene	55.4	5.00	ug/L	50.0	ND	111	0-200	1.42	200	
1,1-Dichloroethene	69.4	5.00	ug/L	50.0	ND	139	1-234	2.32	32	
trans-1,2-Dichloroethene	68.0	4.00	ug/L	50.0	ND	136	54-156	1.29	45	
1,2-Dichloropropane	58.8	5.00	ug/L	50.0	ND	118	1-210	0.762	55	
cis-1,3-Dichloropropene	58.8	5.00	ug/L	50.0	ND	118	1-227	2.10	58	
trans-1,3-Dichloropropene	52.2	5.00	ug/L	50.0	ND	104	17-183	4.86	86	
Ethylbenzene	55.1	5.00	ug/L	50.0	ND	110	37-162	0.236	63	
2-Hexanone (MBK)	62.2	10.0	ug/L	50.0	ND	124	0-200	4.02	200	
Methyl tert-butyl ether (MTBE)	55.3	5.00	ug/L	50.0	ND	111	0-200	2.53	200	
Methylene chloride (Dichloromethane)	58.1	1.00	ug/L	50.0	ND	116	1-221	1.60	28	
4-Methyl-2-pentanone (MIBK)	64.9	10.0	ug/L	50.0	ND	130	0-200	6.60	200	
Styrene	55.8	5.00	ug/L	50.0	ND	112	0-200	3.34	200	
1,1,2,2-Tetrachloroethane	54.5	5.00	ug/L	50.0	ND	109	46-157	2.58	61	
Tetrachloroethene	61.6	5.00	ug/L	50.0	ND	123	64-148	2.74	39	
Toluene	56.5	5.00	ug/L	50.0	ND	113	47-150	3.04	41	
1,1,2-Trichloroethane	58.6	5.00	ug/L	50.0	ND	117	52-150	5.47	45	
1,1,1-Trichloroethane	58.5	5.00	ug/L	50.0	ND	117	52-162	0.566	36	
Trichloroethene	63.6	5.00	ug/L	50.0	ND	127	70-157	0.862	48	
Trichlorofluoromethane (Freon 11)	65.8	5.00	ug/L	50.0	ND	132	17-181	8.36	84	
Vinyl chloride	63.4	5.00	ug/L	50.0	ND	127	1-251	0.506	66	
m,p-Xylene	123	10.0	ug/L	100	ND	123	0-200	0.581	200	
o-Xylene	58.4	5.00	ug/L	50.0	ND	117	0-200	3.57	200	
Vinyl acetate	57.5	5.00	ug/L	50.0	ND	115	60-140	0.331	25	
Surrogate: 1,2-Dichloroethane-d4	*42.1*		ug/L	*50.0*		*84.1*	*70-130*			
Surrogate: Toluene-d8	*48.7*		ug/L	*50.0*		*97.4*	*70-130*			
Surrogate: Pentafluorobenzene	*54.7*		ug/L	*50.0*		*109*	*70-130*			

CERTIFICATE OF ANALYSIS

D1D2548

Definitions

A5:	Sample was filtered (0.45 um) before analysis.
MCL:	US EPA Maximum Contaminant Level
mg CaCO3/L	Milligrams Calcium Carbonate per Liter
mg/L:	Milligrams per Liter
R3:	Duplicate RPD is outside of acceptance criteria. The difference between the results is less than 2x Method Reporting Limit.
RL:	Reporting Limit
RPD:	Relative Percent Difference
ug/L:	Micrograms per Liter
Y1:	Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.9°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008	Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Melisa L. Montgomery
Quality Assurance Officer
Reported: 05/10/2021 13:55

MICROBAC

C
61 Lou
Tel: (8

D 1 D 2 5 4 8

W & C - Plymouth

FOR LAB USE ONLY

Lab WO#

Project Manager

Microbac Laboratories, Inc.

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

DELIVERY: ROBERT BLANCHARD

E-MAIL: [redacted]

PHONE: 508-830-4159 FAX: 508-732-0238

BILL TO: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

PURCHASE ORDER #

ATTENTION: ACCOUNTS PAYABLE

PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP

LOCATION: ID 11773

WELLS - QUARTERLY

ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL

ROBERT SCOTT

PHONE: CELL - 860-204-7988

FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # 6S (250 mL)	4/27/2021	8:46		X	WW	1	X	X											X			
Well # 6S (250 mL)	4/27/2021	8:46		X	WW	1			X	X								X				
Well # 6S (250 mL)(filtered)	4/27/2021	8:46		X	WW	1					X							X				
Well # 6S (250 mL)	4/27/2021	8:46		X	WW	1						X						X				
Well # 6S (250 mL)	4/27/2021	8:46		X	WW	1							X					X				
Well # 6S (250 mL)	4/27/2021	8:46		X	WW	1								X	X	X					X	
Well # 6S (40 mL vial)	4/27/2021	8:46		X	WW	2											X	X				
Well # 6S (40 mL vial)	4/27/2021	8:46		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	4-27-21	
RECEIVED:		
RELINQUISHED:	4/27/21	1341
RECEIVED:	4/27/21	1341
RELINQUISHED:	4/27/21	1626
RECEIVED:	4/27/21	1620

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

VERIFIED

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☐ AMBIENT ☐ 3.9°c

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1D2552

Project Description

Wells - Quarterly

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Friday, May 7, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1D2552

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Quarterly

Project / PO Number: 346346
Received: 04/27/2021
Reported: 05/07/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well 475	D1D2552-01	Groundwater	Grab		04/27/21 10:21	04/27/21 16:20
Well 475	D1D2552-02	Groundwater	Grab		04/27/21 10:21	04/27/21 16:20
Well 475 (filtered)	D1D2552-03	Groundwater	Grab		04/27/21 10:21	04/27/21 16:20
Well 475	D1D2552-04	Groundwater	Grab		04/27/21 10:21	04/27/21 16:20
Well 475	D1D2552-05	Groundwater	Grab		04/27/21 10:21	04/27/21 16:20
Well 475	D1D2552-06	Groundwater	Grab		04/27/21 10:21	04/27/21 16:20
Well 475	D1D2552-07	Groundwater	Grab		04/27/21 10:21	04/27/21 16:20
Well 475	D1D2552-08	Groundwater	Grab		04/27/21 10:21	04/27/21 16:20

CERTIFICATE OF ANALYSIS

D1D2552

Analytical Testing Parameters

Client Sample ID: Well 475
Sample Matrix: Groundwater
Lab Sample ID: D1D2552-01
Collected By: Customer
Collection Date: 04/27/2021 10:21

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 351.1								
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L	1		04/29/21 0933	04/29/21 1542	CLW
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0181**	0.0106	mg/L	1		04/28/21 1900	04/29/21 1139	CLW

Client Sample ID: Well 475
Sample Matrix: Groundwater
Lab Sample ID: D1D2552-02
Collected By: Customer
Collection Date: 04/27/2021 10:21

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-NO_3^- F-2011								
Nitrate as N	**1.95**	0.0500	mg/L	1			04/27/21 1839	DJM
Nitrite as N	<0.0100	0.0100	mg/L	1	**Y1**		04/27/21 1839	DJM

Client Sample ID: Well 475 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1D2552-03
Collected By: Customer
Collection Date: 04/27/2021 10:21

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0290**	0.0100	mg/L	1		04/27/21 1832	04/27/21 2045	DJM

Client Sample ID: Well 475
Sample Matrix: Groundwater
Lab Sample ID: D1D2552-04
Collected By: Customer
Collection Date: 04/27/2021 10:21

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 2320 B-2011								
Alkalinity to pH 4.5	**3.00**	1.00	mg CaCO3/L	1			04/29/21 1500	SRF

Client Sample ID: Well 475
Sample Matrix: Groundwater
Lab Sample ID: D1D2552-05
Collected By: Customer
Collection Date: 04/27/2021 10:21

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
SM 4500-Cl E-2011								
Chloride	**78.6**	2.00	mg/L	1			05/03/21 1201	CLW

CERTIFICATE OF ANALYSIS

D1D2552

Client Sample ID: Well 475
Sample Matrix: Groundwater
Lab Sample ID: D1D2552-06
Collected By: Customer
Collection Date: 04/27/2021 10:21

Metals Total by ICP	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 200.7, Rv. 4.4 (1994)								
Boron	**0.0189**	0.0050	mg/L	1	**Y1**	04/29/21 1349	04/30/21 1710	DLO
Copper	<0.0020	0.0020	mg/L	1		04/29/21 1349	04/30/21 1710	DLO
Sodium	**39.8**	1.00	mg/L	1		04/29/21 1349	04/30/21 1710	DLO

Client Sample ID: Well 475
Sample Matrix: Groundwater
Lab Sample ID: D1D2552-07
Collected By: Customer
Collection Date: 04/27/2021 10:21

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acrolein	<20.0	20.0	ug/L	1			04/29/21 1747	JAN
2-Chloroethyl vinyl ether	<20.0	20.0	ug/L	1			04/29/21 1747	JAN
Surrogate: 1,2-Dichloroethane-d4	99.4	Limit: 70-130	% Rec	1			04/29/21 1747	JAN
Surrogate: Toluene-d8	106	Limit: 70-130	% Rec	1			04/29/21 1747	JAN
Surrogate: Pentafluorobenzene	98.7	Limit: 70-130	% Rec	1			04/29/21 1747	JAN

CERTIFICATE OF ANALYSIS

D1D2552

Client Sample ID:	Well 475		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D2552-08	**Collection Date:**	04/27/2021 10:21

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 624.1								
Acetone	<10.0	10.0	ug/L	1	**Y1**		05/04/21 2056	RSD
Acrylonitrile	<20.0	20.0	ug/L	1			05/04/21 2056	RSD
Benzene	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
Bromodichloromethane	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
Bromoform	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
Bromomethane	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
2-Butanone (MEK)	<10.0	10.0	ug/L	1	**Y1**		05/04/21 2056	RSD
Carbon disulfide	<5.00	5.00	ug/L	1	**Y1**		05/04/21 2056	RSD
Carbon tetrachloride	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
Chlorobenzene	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
Chloroform	<4.00	4.00	ug/L	1			05/04/21 2056	RSD
Chloromethane	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
Dibromochloromethane	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L	1	**Y1**		05/04/21 2056	RSD
1,2-Dichlorobenzene	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
1,3-Dichlorobenzene	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
1,4-Dichlorobenzene	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L	1	**Y1**		05/04/21 2056	RSD
1,2-Dichloroethane	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
1,1-Dichloroethane	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
cis-1,2-Dichloroethene	<5.00	5.00	ug/L	1	**Y1**		05/04/21 2056	RSD
1,1-Dichloroethene	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
trans-1,2-Dichloroethene	<4.00	4.00	ug/L	1			05/04/21 2056	RSD
1,2-Dichloropropane	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
cis-1,3-Dichloropropene	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
trans-1,3-Dichloropropene	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
Ethylbenzene	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
2-Hexanone (MBK)	<10.0	10.0	ug/L	1	**Y1**		05/04/21 2056	RSD
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L	1	**Y1**		05/04/21 2056	RSD
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L	1			05/04/21 2056	RSD
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L	1	**Y1**		05/04/21 2056	RSD
Styrene	<5.00	5.00	ug/L	1	**Y1**		05/04/21 2056	RSD
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
Tetrachloroethene	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
Toluene	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
1,1,2-Trichloroethane	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
1,1,1-Trichloroethane	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
Trichloroethene	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
Vinyl chloride	<5.00	5.00	ug/L	1			05/04/21 2056	RSD
m,p-Xylene	<10.0	10.0	ug/L	1	**Y1**		05/04/21 2056	RSD

CERTIFICATE OF ANALYSIS

D1D2552

Client Sample ID:	Well 475		
Sample Matrix:	Groundwater	**Collected By:**	Customer
Lab Sample ID:	D1D2552-08	**Collection Date:**	04/27/2021 10:21

Volatile Organic Compounds by GCMS	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
o-Xylene	<5.00	5.00	ug/L	1	**Y1**		05/04/21 2056	RSD
Vinyl acetate	<5.00	5.00	ug/L	1	**Y1**		05/04/21 2056	RSD
Surrogate: 1,2-Dichloroethane-d4	89.4	Limit: 70-130	% Rec	1			05/04/21 2056	RSD
Surrogate: Toluene-d8	99.9	Limit: 70-130	% Rec	1			05/04/21 2056	RSD
Surrogate: Pentafluorobenzene	102	Limit: 70-130	% Rec	1			05/04/21 2056	RSD

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-$NO3^-$ F-2011	DD11737	DD11737-DUP1	D1D2495-02
		DD11737-DUP1	D1D2495-02
		DD11737-MS1	D1D2495-02
		DD11737-MS1	D1D2495-02
		DD11737-MSD1	D1D2495-02
		DD11737-MSD1	D1D2495-02
		DD11737-BS1	
		DD11737-BS2	
		DD11737-BLK1	
		DD11737-BLK1	
		D1D2552-02	Well 475
		D1D2552-02	Well 475

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DD11775	DD11775-BS1	
		DD11775-BLK1	
		DD11775-MS1	D1D2545-03
		DD11775-DUP1	D1D2545-03
		DD11775-MS2	D1D2548-03
		D1D2552-03	Well 475 (filtered)

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DD11849	DD11849-BS1	
		DD11849-BLK1	
		DD11849-MS2	L1D0529-01
		D1D2552-01	Well 475
		DD11849-DUP1	L1D0510-02
		DD11849-MS1	L1D0510-02

Method	Batch	Laboratory ID	Client / Source ID
EPA 351.1	DD11879	DD11879-BS1	
		DD11879-BLK1	
		DD11879-DUP1	D1D2505-08
		DD11879-MS1	D1D2505-08
		DD11879-MS2	D1D2507-08
		D1D2552-01	Well 475

Method	Batch	Laboratory ID	Client / Source ID
EPA 200.7, Rv. 4.4 (1994)	DD11894	DD11894-BLK1	
		DD11894-BS1	
		DD11894-DUP1	D1D2619-02

EPA 200.7, Rv. 4.4 (1994)	DD11894	DD11894-MS1	D1D2487-01
		D1D2552-06	Well 475
		D1D2552-06	Well 475

Method	Batch	Laboratory ID	Client / Source ID
SM 2320 B-2011	DD11941	DD11941-DUP1	D1D2611-03
		DD11941-BS1	
		D1D2552-04	Well 475
		DD11941-BLK1	

Method	Batch	Laboratory ID	Client / Source ID
SM 4500-Cl E-2011	DE10004	DE10004-BS1	
		DE10004-BLK1	
		DE10004-DUP1	D1D2548-05
		DE10004-MS1	D1D2548-05
		DE10004-MSD1	D1D2548-05
		D1D2552-05	Well 475

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DE10010	D1D2552-07	Well 475

Method	Batch	Laboratory ID	Client / Source ID
EPA 624.1	DE10351	DE10351-BS1	
		DE10351-BLK1	
		DE10351-MS1	D1D2545-08
		DE10351-MSD1	D1D2545-08
		D1D2552-08	Well 475

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11737 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Blank (DD11737-BLK1)			Prepared & Analyzed: 04/27/2021							
Nitrite as N	<0.0100	0.0100	mg/L							
Nitrate as N	<0.0500	0.0500	mg/L							
LCS (DD11737-BS1)			Prepared & Analyzed: 04/27/2021							
Nitrate as N	5.16	0.0500	mg/L	5.00		103	90-110			
LCS (DD11737-BS2)			Prepared & Analyzed: 04/27/2021							
Nitrite as N	1.00	0.0100	mg/L	1.00		100	90-110			
Duplicate (DD11737-DUP1)		**Source: D1D2495-02**	Prepared & Analyzed: 04/27/2021							
Nitrite as N	0.523	0.0100	mg/L		0.534			2.12	20	A5
Nitrate as N	<0.0500	0.0500	mg/L		ND				20	A5
Matrix Spike (DD11737-MS1)		**Source: D1D2495-02**	Prepared & Analyzed: 04/27/2021							
Nitrite as N	1.52	0.0100	mg/L	1.00	0.534	98.4	75-125			A5

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11737 - Wet Chem - W - SM 4500-NO3¯ F-2011										
Matrix Spike (DD11737-MS1)		**Source: D1D2495-02**		Prepared & Analyzed: 04/27/2021						
Nitrate as N	5.16	0.0500	mg/L	5.00	ND	103	75-125			A5
Matrix Spike Dup (DD11737-MSD1)		**Source: D1D2495-02**		Prepared & Analyzed: 04/27/2021						
Nitrite as N	1.52	0.0100	mg/L	1.00	0.534	98.9	75-125	0.368	20	A5
Nitrate as N	5.05	0.0500	mg/L	5.00	ND	101	75-125	2.07	20	A5
Batch DD11775 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DD11775-BLK1)				Prepared & Analyzed: 04/27/2021						
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DD11775-BS1)				Prepared & Analyzed: 04/27/2021						
Ortho-phosphate as P	1.01	0.0100	mg/L	1.00		101	90-110			
Duplicate (DD11775-DUP1)		**Source: D1D2545-03**		Prepared & Analyzed: 04/27/2021						
Ortho-phosphate as P	0.0200	0.0100	mg/L		0.0250			22.2	20	R3
Matrix Spike (DD11775-MS1)		**Source: D1D2545-03**		Prepared & Analyzed: 04/27/2021						
Ortho-phosphate as P	0.951	0.0100	mg/L	1.00	0.0250	92.6	90-110			
Matrix Spike (DD11775-MS2)		**Source: D1D2548-03**		Prepared & Analyzed: 04/27/2021						
Ortho-phosphate as P	0.988	0.0100	mg/L	1.00	0.0120	97.5	90-110			
Batch DD11849 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DD11849-BLK1)				Prepared: 04/28/2021 Analyzed: 04/29/2021						
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DD11849-BS1)				Prepared: 04/28/2021 Analyzed: 04/29/2021						
Phosphorus - Total as P	0.932	0.0106	mg/L	1.00		93.2	90-110			
Duplicate (DD11849-DUP1)		**Source: L1D0510-02**		Prepared: 04/28/2021 Analyzed: 04/29/2021						
Phosphorus - Total as P	2.09	0.0213	mg/L		2.08			0.561	20	
Matrix Spike (DD11849-MS1)		**Source: L1D0510-02**		Prepared: 04/28/2021 Analyzed: 04/29/2021						
Phosphorus - Total as P	3.36	0.0213	mg/L	1.25	2.08	102	90-110			
Matrix Spike (DD11849-MS2)		**Source: L1D0529-01**		Prepared: 04/28/2021 Analyzed: 04/29/2021						
Phosphorus - Total as P	1.22	0.0106	mg/L	1.25	0.0553	92.9	90-110			
Batch DD11879 - Wet-Digestion-W - EPA 351.1										
Blank (DD11879-BLK1)				Prepared & Analyzed: 04/29/2021						
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L							
LCS (DD11879-BS1)				Prepared & Analyzed: 04/29/2021						
Total Kjeldahl Nitrogen (TKN)	5.04	0.200	mg/L	5.00		101	90-110			
Duplicate (DD11879-DUP1)		**Source: D1D2505-08**		Prepared & Analyzed: 04/29/2021						
Total Kjeldahl Nitrogen (TKN)	<0.200	0.200	mg/L		ND				20	
Matrix Spike (DD11879-MS1)		**Source: D1D2505-08**		Prepared & Analyzed: 04/29/2021						
Total Kjeldahl Nitrogen (TKN)	10.5	0.200	mg/L	10.0	ND	105	90-110			
Matrix Spike (DD11879-MS2)		**Source: D1D2507-08**		Prepared & Analyzed: 04/29/2021						

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11879 - Wet-Digestion-W - EPA 351.1										
Matrix Spike (DD11879-MS2)		**Source: D1D2507-08**		Prepared & Analyzed: 04/29/2021						
Total Kjeldahl Nitrogen (TKN)	16.2	0.200	mg/L	10.0	5.73	105	90-110			
Batch DD11941 - Wet Chem - W - SM 2320 B-2011										
Blank (DD11941-BLK1)				Prepared & Analyzed: 04/29/2021						
Alkalinity to pH 4.5	<1.00	1.00	mg CaCO3/ L							
LCS (DD11941-BS1)				Prepared & Analyzed: 04/29/2021						
Alkalinity to pH 4.5	50.0	1.00	mg CaCO3/ L	50.0		100	90-110			
Duplicate (DD11941-DUP1)		**Source: D1D2611-03**		Prepared & Analyzed: 04/29/2021						
Alkalinity to pH 4.5	133	1.00	mg CaCO3/ L		133			0.00	20	
Batch DE10004 - Wet Chem - W - SM 4500-Cl E-2011										
Blank (DE10004-BLK1)				Prepared & Analyzed: 05/03/2021						
Chloride	<2.00	2.00	mg/L							
LCS (DE10004-BS1)				Prepared & Analyzed: 05/03/2021						
Chloride	19.4	2.00	mg/L	20.0		96.8	90-110			
Duplicate (DE10004-DUP1)		**Source: D1D2548-05**		Prepared & Analyzed: 05/03/2021						
Chloride	27.1	2.00	mg/L		26.6			1.73	20	
Matrix Spike (DE10004-MS1)		**Source: D1D2548-05**		Prepared & Analyzed: 05/03/2021						
Chloride	49.6	2.00	mg/L	20.0	26.6	115	75-125			
Matrix Spike Dup (DE10004-MSD1)		**Source: D1D2548-05**		Prepared & Analyzed: 05/03/2021						
Chloride	48.3	2.00	mg/L	20.0	26.6	108	75-125	2.59	20	

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11894 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Blank (DD11894-BLK1)				Prepared: 04/29/2021 Analyzed: 04/30/2021						
Boron	<0.0050	0.0050	mg/L							
Copper	<0.0020	0.0020	mg/L							
Sodium	<1.00	1.00	mg/L							
LCS (DD11894-BS1)				Prepared: 04/29/2021 Analyzed: 04/30/2021						
Boron	0.537	0.0050	mg/L	0.500		107	85-115			
Copper	0.532	0.0020	mg/L	0.500		106	85-115			
Sodium	11.5	1.00	mg/L	10.5		110	85-115			
Duplicate (DD11894-DUP1)		**Source: D1D2619-02**		Prepared: 04/29/2021 Analyzed: 04/30/2021						
Boron	0.0109	0.0050	mg/L		0.0109			0.219	20	
Copper	<0.0020	0.0020	mg/L		ND				20	

Metals Total by ICP	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DD11894 - 200.7 - W - EPA 200.7, Rv. 4.4 (1994)										
Duplicate (DD11894-DUP1)		**Source: D1D2619-02**		Prepared: 04/29/2021 Analyzed: 04/30/2021						
Sodium	14.1	1.00	mg/L		14.0			0.864	20	
Matrix Spike (DD11894-MS1)		**Source: D1D2487-01**		Prepared: 04/29/2021 Analyzed: 04/30/2021						
Boron	1.34	0.0050	mg/L	0.500	0.802	107	70-130			
Copper	0.549	0.0020	mg/L	0.500	0.0182	106	70-130			
Sodium	54.4	1.00	mg/L	10.5	43.1	108	70-130			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DE10351 - 624.1 - EPA 624.1										
Blank (DE10351-BLK1)				Prepared & Analyzed: 05/04/2021						
Acetone	<10.0	10.0	ug/L							
Acrylonitrile	<20.0	20.0	ug/L							
Benzene	<5.00	5.00	ug/L							
Bromodichloromethane	<5.00	5.00	ug/L							
Bromoform	<5.00	5.00	ug/L							
Bromomethane	<5.00	5.00	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Carbon disulfide	<5.00	5.00	ug/L							
Carbon tetrachloride	<5.00	5.00	ug/L							
Chlorobenzene	<5.00	5.00	ug/L							
Chloroethane (Ethyl chloride)	<5.00	5.00	ug/L							
Chloroform	<4.00	4.00	ug/L							
Chloromethane	<5.00	5.00	ug/L							
Dibromochloromethane	<5.00	5.00	ug/L							
Dibromomethane (Methylene bromide)	<5.00	5.00	ug/L							
1,2-Dichlorobenzene	<5.00	5.00	ug/L							
1,3-Dichlorobenzene	<5.00	5.00	ug/L							
1,4-Dichlorobenzene	<5.00	5.00	ug/L							
Dichlorodifluoromethane (Freon-12)	<5.00	5.00	ug/L							
1,2-Dichloroethane	<5.00	5.00	ug/L							
1,1-Dichloroethane	<5.00	5.00	ug/L							
cis-1,2-Dichloroethene	<5.00	5.00	ug/L							
1,1-Dichloroethene	<5.00	5.00	ug/L							
trans-1,2-Dichloroethene	<4.00	4.00	ug/L							
1,2-Dichloropropane	<5.00	5.00	ug/L							
cis-1,3-Dichloropropene	<5.00	5.00	ug/L							
trans-1,3-Dichloropropene	<5.00	5.00	ug/L							
Ethylbenzene	<5.00	5.00	ug/L							
2-Hexanone (MBK)	<10.0	10.0	ug/L							
Methyl tert-butyl ether (MTBE)	<5.00	5.00	ug/L							
Methylene chloride (Dichloromethane)	<1.00	1.00	ug/L							

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DE10351 - 624.1 - EPA 624.1										
Blank (DE10351-BLK1)			Prepared & Analyzed: 05/04/2021							
4-Methyl-2-pentanone (MIBK)	<10.0	10.0	ug/L							
Styrene	<5.00	5.00	ug/L							
1,1,2,2-Tetrachloroethane	<5.00	5.00	ug/L							
Tetrachloroethene	<5.00	5.00	ug/L							
Toluene	<5.00	5.00	ug/L							
1,1,2-Trichloroethane	<5.00	5.00	ug/L							
1,1,1-Trichloroethane	<5.00	5.00	ug/L							
Trichloroethene	<5.00	5.00	ug/L							
Trichlorofluoromethane (Freon 11)	<5.00	5.00	ug/L							
Vinyl chloride	<5.00	5.00	ug/L							
m,p-Xylene	<10.0	10.0	ug/L							
o-Xylene	<5.00	5.00	ug/L							
Vinyl acetate	<5.00	5.00	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*42.8*		ug/L	*50.0*		*85.5*	*70-130*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.0*		*98.8*	*70-130*			
LCS (DE10351-BS1)			Prepared & Analyzed: 05/04/2021							
Acetone	40.7	10.0	ug/L	50.0		81.4	42.1-136			
Acrylonitrile	50.2	20.0	ug/L	50.0		100	60-140			
Benzene	47.0	5.00	ug/L	50.0		93.9	65-135			
Bromodichloromethane	43.7	5.00	ug/L	50.0		87.5	65-135			
Bromoform	47.9	5.00	ug/L	50.0		95.8	70-130			
Bromomethane	47.1	5.00	ug/L	50.0		94.2	15-185			
2-Butanone (MEK)	49.7	10.0	ug/L	50.0		99.3	63.1-143			
Carbon disulfide	46.6	5.00	ug/L	50.0		93.2	63.5-124			
Carbon tetrachloride	48.1	5.00	ug/L	50.0		96.1	70-130			
Chlorobenzene	45.3	5.00	ug/L	50.0		90.6	65-135			
Chloroethane (Ethyl chloride)	32.1	5.00	ug/L	50.0		64.3	40-160			
Chloroform	44.3	4.00	ug/L	50.0		88.5	70-135			
Chloromethane	49.3	5.00	ug/L	50.0		98.6	1-205			
Dibromochloromethane	48.6	5.00	ug/L	50.0		97.2	70-135			
Dibromomethane (Methylene bromide)	42.5	5.00	ug/L	50.0		84.9	73.8-124			
1,2-Dichlorobenzene	46.3	5.00	ug/L	50.0		92.6	65-135			
1,3-Dichlorobenzene	46.7	5.00	ug/L	50.0		93.4	70-130			
1,4-Dichlorobenzene	44.8	5.00	ug/L	50.0		89.6	65-135			
Dichlorodifluoromethane (Freon-12)	44.3	5.00	ug/L	50.0		88.6	34.7-129			
1,2-Dichloroethane	44.1	5.00	ug/L	50.0		88.1	70-130			
1,1-Dichloroethane	45.5	5.00	ug/L	50.0		91.1	70-130			
cis-1,2-Dichloroethene	45.5	5.00	ug/L	50.0		90.9	75.5-125			
1,1-Dichloroethene	51.9	5.00	ug/L	50.0		104	50-150			
trans-1,2-Dichloroethene	53.4	4.00	ug/L	50.0		107	70-130			
1,2-Dichloropropane	48.3	5.00	ug/L	50.0		96.6	35-165			
cis-1,3-Dichloropropene	49.3	5.00	ug/L	50.0		98.6	25-175			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DE10351 - 624.1 - EPA 624.1										
LCS (DE10351-BS1)				Prepared & Analyzed: 05/04/2021						
trans-1,3-Dichloropropene	44.1	5.00	ug/L	50.0		88.1	50-150			
Ethylbenzene	44.4	5.00	ug/L	50.0		88.8	60-140			
2-Hexanone (MBK)	51.2	10.0	ug/L	50.0		102	73.6-130			
Methyl tert-butyl ether (MTBE)	45.9	5.00	ug/L	50.0		91.8	69-151			
Methylene chloride (Dichloromethane)	48.2	1.00	ug/L	50.0		96.4	60-140			
4-Methyl-2-pentanone (MIBK)	52.1	10.0	ug/L	50.0		104	72.5-129			
Styrene	45.6	5.00	ug/L	50.0		91.2	79.2-127			
1,1,2,2-Tetrachloroethane	42.8	5.00	ug/L	50.0		85.7	60-140			
Tetrachloroethene	50.7	5.00	ug/L	50.0		101	70-130			
Toluene	45.8	5.00	ug/L	50.0		91.6	70-130			
1,1,2-Trichloroethane	46.7	5.00	ug/L	50.0		93.4	70-130			
1,1,1-Trichloroethane	43.8	5.00	ug/L	50.0		87.5	70-130			
Trichloroethene	50.9	5.00	ug/L	50.0		102	65-135			
Trichlorofluoromethane (Freon 11)	52.3	5.00	ug/L	50.0		105	50-150			
Vinyl chloride	54.2	5.00	ug/L	50.0		108	5-195			
m,p-Xylene	98.5	10.0	ug/L	100		98.5	77.1-129			
o-Xylene	46.8	5.00	ug/L	50.0		93.5	78.8-126			
Vinyl acetate	60.3	5.00	ug/L	50.0		121	60-140			
Surrogate: 1,2-Dichloroethane-d4	*40.8*		ug/L	*50.0*		*81.6*	*70-130*			
Surrogate: Toluene-d8	*48.0*		ug/L	*50.0*		*96.1*	*70-130*			
Surrogate: Pentafluorobenzene	*52.0*		ug/L	*50.0*		*104*	*70-130*			
Matrix Spike (DE10351-MS1)	**Source: D1D2545-08**			Prepared & Analyzed: 05/04/2021						
Acetone	40.8	10.0	ug/L	50.0	ND	81.6	0-200			
Acrylonitrile	53.3	20.0	ug/L	50.0	ND	107	40-160			
Benzene	48.8	5.00	ug/L	50.0	ND	97.6	37-151			
Bromodichloromethane	44.8	5.00	ug/L	50.0	ND	89.5	35-155			
Bromoform	47.3	5.00	ug/L	50.0	ND	94.5	45-169			
Bromomethane	52.1	5.00	ug/L	50.0	ND	104	1-242			
2-Butanone (MEK)	51.2	10.0	ug/L	50.0	ND	102	0-200			
Carbon disulfide	52.1	5.00	ug/L	50.0	ND	104	0-200			
Carbon tetrachloride	52.1	5.00	ug/L	50.0	ND	104	70-140			
Chlorobenzene	45.9	5.00	ug/L	50.0	ND	91.9	37-160			
Chloroethane (Ethyl chloride)	33.6	5.00	ug/L	50.0	ND	67.1	14-230			
Chloroform	46.8	4.00	ug/L	50.0	ND	93.6	51-138			
Chloromethane	56.2	5.00	ug/L	50.0	ND	112	1-273			
Dibromochloromethane	49.4	5.00	ug/L	50.0	ND	98.7	53-149			
Dibromomethane (Methylene bromide)	43.5	5.00	ug/L	50.0	ND	87.1	0-200			
1,2-Dichlorobenzene	45.5	5.00	ug/L	50.0	ND	91.1	18-190			
1,3-Dichlorobenzene	46.2	5.00	ug/L	50.0	ND	92.4	59-156			
1,4-Dichlorobenzene	44.0	5.00	ug/L	50.0	ND	88.0	18-190			
Dichlorodifluoromethane (Freon-12)	49.2	5.00	ug/L	50.0	ND	98.5	0-200			

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DE10351 - 624.1 - EPA 624.1										
Matrix Spike (DE10351-MS1)	**Source: D1D2545-08**		Prepared & Analyzed: 05/04/2021							
1,2-Dichloroethane	44.7	5.00	ug/L	50.0	ND	89.4	49-155			
1,1-Dichloroethane	47.8	5.00	ug/L	50.0	ND	95.5	59-155			
cis-1,2-Dichloroethene	47.1	5.00	ug/L	50.0	ND	94.2	0-200			
1,1-Dichloroethene	57.9	5.00	ug/L	50.0	ND	116	1-234			
trans-1,2-Dichloroethene	57.6	4.00	ug/L	50.0	ND	115	54-156			
1,2-Dichloropropane	51.2	5.00	ug/L	50.0	ND	102	1-210			
cis-1,3-Dichloropropene	48.1	5.00	ug/L	50.0	ND	96.1	1-227			
trans-1,3-Dichloropropene	42.8	5.00	ug/L	50.0	ND	85.6	17-183			
Ethylbenzene	45.1	5.00	ug/L	50.0	ND	90.3	37-162			
2-Hexanone (MBK)	54.0	10.0	ug/L	50.0	ND	108	0-200			
Methyl tert-butyl ether (MTBE)	46.0	5.00	ug/L	50.0	ND	91.9	0-200			
Methylene chloride (Dichloromethane)	48.9	1.00	ug/L	50.0	ND	97.8	1-221			
4-Methyl-2-pentanone (MIBK)	54.0	10.0	ug/L	50.0	ND	108	0-200			
Styrene	44.2	5.00	ug/L	50.0	ND	88.3	0-200			
1,1,2,2-Tetrachloroethane	45.0	5.00	ug/L	50.0	ND	90.1	46-157			
Tetrachloroethene	50.9	5.00	ug/L	50.0	ND	102	64-148			
Toluene	46.0	5.00	ug/L	50.0	ND	91.9	47-150			
1,1,2-Trichloroethane	47.1	5.00	ug/L	50.0	ND	94.1	52-150			
1,1,1-Trichloroethane	48.3	5.00	ug/L	50.0	ND	96.5	52-162			
Trichloroethene	50.8	5.00	ug/L	50.0	ND	102	70-157			
Trichlorofluoromethane (Freon 11)	61.2	5.00	ug/L	50.0	ND	122	17-181			
Vinyl chloride	62.6	5.00	ug/L	50.0	ND	125	1-251			
m,p-Xylene	97.7	10.0	ug/L	100	ND	97.7	0-200			
o-Xylene	46.8	5.00	ug/L	50.0	ND	93.6	0-200			
Vinyl acetate	63.1	5.00	ug/L	50.0	ND	126	60-140			
Surrogate: 1,2-Dichloroethane-d4	*42.5*		ug/L	*50.0*		*85.1*	*70-130*			
Surrogate: Toluene-d8	*48.3*		ug/L	*50.0*		*96.5*	*70-130*			
Surrogate: Pentafluorobenzene	*53.1*		ug/L	*50.0*		*106*	*70-130*			
Matrix Spike Dup (DE10351-MSD1)	**Source: D1D2545-08**		Prepared & Analyzed: 05/04/2021							
Acetone	41.1	10.0	ug/L	50.0	ND	82.2	0-200	0.732	200	
Acrylonitrile	55.5	20.0	ug/L	50.0	ND	111	40-160	4.14	60	
Benzene	48.3	5.00	ug/L	50.0	ND	96.6	37-151	1.07	61	
Bromodichloromethane	45.8	5.00	ug/L	50.0	ND	91.6	35-155	2.23	56	
Bromoform	51.1	5.00	ug/L	50.0	ND	102	45-169	7.89	42	
Bromomethane	49.2	5.00	ug/L	50.0	ND	98.4	1-242	5.73	61	
2-Butanone (MEK)	50.2	10.0	ug/L	50.0	ND	100	0-200	1.99	200	
Carbon disulfide	48.7	5.00	ug/L	50.0	ND	97.4	0-200	6.74	200	
Carbon tetrachloride	52.1	5.00	ug/L	50.0	ND	104	70-140	0.0384	41	
Chlorobenzene	47.3	5.00	ug/L	50.0	ND	94.6	37-160	2.92	53	
Chloroethane (Ethyl chloride)	30.3	5.00	ug/L	50.0	ND	60.6	14-230	10.3	78	
Chloroform	47.9	4.00	ug/L	50.0	ND	95.7	51-138	2.22	54	
Chloromethane	52.3	5.00	ug/L	50.0	ND	105	1-273	7.32	60	

Volatile Organic Compounds by GCMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DE10351 - 624.1 - EPA 624.1										
Matrix Spike Dup (DE10351-MSD1)	**Source: D1D2545-08**		Prepared & Analyzed: 05/04/2021							
Dibromochloromethane	52.7	5.00	ug/L	50.0	ND	105	53-149	6.49	50	
Dibromomethane (Methylene bromide)	46.0	5.00	ug/L	50.0	ND	91.9	0-200	5.45	200	
1,2-Dichlorobenzene	49.4	5.00	ug/L	50.0	ND	98.7	18-190	8.05	57	
1,3-Dichlorobenzene	48.3	5.00	ug/L	50.0	ND	96.7	59-156	4.53	43	
1,4-Dichlorobenzene	46.7	5.00	ug/L	50.0	ND	93.5	18-190	6.08	57	
Dichlorodifluoromethane (Freon-12)	45.4	5.00	ug/L	50.0	ND	90.9	0-200	8.03	200	
1,2-Dichloroethane	46.1	5.00	ug/L	50.0	ND	92.2	49-155	3.04	49	
1,1-Dichloroethane	47.9	5.00	ug/L	50.0	ND	95.9	59-155	0.376	40	
cis-1,2-Dichloroethene	48.2	5.00	ug/L	50.0	ND	96.3	0-200	2.27	200	
1,1-Dichloroethene	55.7	5.00	ug/L	50.0	ND	111	1-234	3.89	32	
trans-1,2-Dichloroethene	57.9	4.00	ug/L	50.0	ND	116	54-156	0.641	45	
1,2-Dichloropropane	50.5	5.00	ug/L	50.0	ND	101	1-210	1.40	55	
cis-1,3-Dichloropropene	51.7	5.00	ug/L	50.0	ND	103	1-227	7.24	58	
trans-1,3-Dichloropropene	45.3	5.00	ug/L	50.0	ND	90.6	17-183	5.70	86	
Ethylbenzene	46.4	5.00	ug/L	50.0	ND	92.8	37-162	2.75	63	
2-Hexanone (MBK)	55.8	10.0	ug/L	50.0	ND	112	0-200	3.21	200	
Methyl tert-butyl ether (MTBE)	46.7	5.00	ug/L	50.0	ND	93.4	0-200	1.66	200	
Methylene chloride (Dichloromethane)	50.0	1.00	ug/L	50.0	ND	99.9	1-221	2.14	28	
4-Methyl-2-pentanone (MIBK)	55.3	10.0	ug/L	50.0	ND	111	0-200	2.42	200	
Styrene	46.6	5.00	ug/L	50.0	ND	93.2	0-200	5.35	200	
1,1,2,2-Tetrachloroethane	49.1	5.00	ug/L	50.0	ND	98.1	46-157	8.52	61	
Tetrachloroethene	51.6	5.00	ug/L	50.0	ND	103	64-148	1.33	39	
Toluene	49.1	5.00	ug/L	50.0	ND	98.2	47-150	6.63	41	
1,1,2-Trichloroethane	49.8	5.00	ug/L	50.0	ND	99.6	52-150	5.72	45	
1,1,1-Trichloroethane	47.5	5.00	ug/L	50.0	ND	95.0	52-162	1.55	36	
Trichloroethene	52.7	5.00	ug/L	50.0	ND	105	70-157	3.73	48	
Trichlorofluoromethane (Freon 11)	58.1	5.00	ug/L	50.0	ND	116	17-181	5.13	84	
Vinyl chloride	57.3	5.00	ug/L	50.0	ND	115	1-251	8.81	66	
m,p-Xylene	100	10.0	ug/L	100	ND	100	0-200	2.51	200	
o-Xylene	48.9	5.00	ug/L	50.0	ND	97.8	0-200	4.35	200	
Vinyl acetate	62.6	5.00	ug/L	50.0	ND	125	60-140	0.828	25	
Surrogate: 1,2-Dichloroethane-d4	*42.4*		ug/L	*50.0*		*84.7*	*70-130*			
Surrogate: Toluene-d8	*48.8*		ug/L	*50.0*		*97.6*	*70-130*			
Surrogate: Pentafluorobenzene	*53.8*		ug/L	*50.0*		*108*	*70-130*			

CERTIFICATE OF ANALYSIS

D1D2552

Definitions

A5:	Sample was filtered (0.45 um) before analysis.
MCL:	US EPA Maximum Contaminant Level
mg CaCO3/L	Milligrams Calcium Carbonate per Liter
mg/L:	Milligrams per Liter
R3:	Duplicate RPD is outside of acceptance criteria. The difference between the results is less than 2x Method Reporting Limit.
RL:	Reporting Limit
RPD:	Relative Percent Difference
ug/L:	Micrograms per Liter
Y1:	Accreditation is not offered by the accrediting body for this analyte.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.9°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008	Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Melisa L. Montgomery
Quality Assurance Officer
Reported: 05/07/2021 16:16

MICROBAC

CH
61 Loui
Tel: (8(

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W & C - Plymouth

FOR LAB USE ONLY

Lab WO#

Project Manager

Microbac Laboratories, Inc.

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

DELIVERY: ROBERT BLANCHARD

E-MAIL:

PHONE: 508-830-4159 FAX: 508-732-0238

BILL TO: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

PURCHASE ORDER #

ATTENTION: ACCOUNTS PAYABLE

PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP

LOCATION: ID 11773

WELLS - QUARTERLY

ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL

ROBERT SCOTT

PHONE: CELL - 860-204-7988

FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # 475 (250 mL)	4/27/2021	10:21		X	WW	1	X	X											X			
Well # 475 (250 mL)	4/27/2021	10:21		X	WW	1			X	X								X				
Well # 475 (250 mL)(filtered)	4/27/2021	10:21		X	WW	1					X							X				
Well # 475 (250 mL)	4/27/2021	10:21		X	WW	1						X						X				
Well # 475 (250 mL)	4/27/2021	10:21		X	WW	1							X					X				
Well # 475 (250 mL)	4/27/2021	10:21		X	WW	1								X	X	X					X	
Well # 475 (40 mL vial)	4/27/2021	10:21		X	WW	2											X	X				
Well # 475 (40 mL vial)	4/27/2021	10:21		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	4-27-21	
RECEIVED:		
RELINQUISHED:	4/27/21	1341
RECEIVED:	4/27/21	1341
RELINQUISHED:	4/27/21	1620
RECEIVED:	4/27/21	1620

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☒ AMBIENT ☐ 3.9°c

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1E1836

Project Description

Wells - Monthly TO & OP

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Monday, May 24, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request . This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1E1836

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Monthly TO & OP

Project / PO Number: 346346
Received: 05/18/2021
Reported: 05/24/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well #1S	D1E1836-01	Groundwater	Grab		05/18/21 09:15	05/18/21 16:24
Well #1S (filtered)	D1E1836-02	Groundwater	Grab		05/18/21 09:15	05/18/21 16:24
Well #A8	D1E1836-03	Groundwater	Grab		05/18/21 12:10	05/18/21 16:24
Well #A8 (filtered)	D1E1836-04	Groundwater	Grab		05/18/21 12:10	05/18/21 16:24
Well #A9	D1E1836-05	Groundwater	Grab		05/18/21 10:17	05/18/21 16:24
Well A9 (filtered)	D1E1836-06	Groundwater	Grab		05/18/21 10:17	05/18/21 16:24
Well #A10	D1E1836-07	Groundwater	Grab		05/18/21 11:35	05/18/21 16:24
Well #A10 (filtered)	D1E1836-08	Groundwater	Grab		05/18/21 11:35	05/18/21 16:24
Well #A11	D1E1836-09	Groundwater	Grab		05/18/21 12:58	05/18/21 16:24
Well #A11 (filtered)	D1E1836-10	Groundwater	Grab		05/18/21 12:58	05/18/21 16:24

CERTIFICATE OF ANALYSIS

D1E1836

Analytical Testing Parameters

Client Sample ID: Well #1S
Sample Matrix: Groundwater
Lab Sample ID: D1E1836-01
Collected By: Customer
Collection Date: 05/18/2021 9:15

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0138**	0.0106	mg/L	1		05/19/21 1930	05/20/21 0954	CLW

Client Sample ID: Well #1S (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1E1836-02
Collected By: Customer
Collection Date: 05/18/2021 9:15

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	<0.0100	0.0100	mg/L	1		05/18/21 1751	05/18/21 2225	DJM

Client Sample ID: Well #A8
Sample Matrix: Groundwater
Lab Sample ID: D1E1836-03
Collected By: Customer
Collection Date: 05/18/2021 12:10

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**2.19**	0.0213	mg/L	2		05/19/21 1930	05/20/21 1022	CLW

Client Sample ID: Well #A8 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1E1836-04
Collected By: Customer
Collection Date: 05/18/2021 12:10

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**2.18**	0.0200	mg/L	2		05/18/21 1751	05/18/21 2242	DJM

Client Sample ID: Well #A9
Sample Matrix: Groundwater
Lab Sample ID: D1E1836-05
Collected By: Customer
Collection Date: 05/18/2021 10:17

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0298**	0.0106	mg/L	1		05/19/21 1930	05/20/21 0955	CLW

CERTIFICATE OF ANALYSIS

D1E1836

Client Sample ID: Well A9 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1E1836-06
Collected By: Customer
Collection Date: 05/18/2021 10:17

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0610**	0.0100	mg/L	1		05/18/21 1751	05/18/21 2229	DJM

Client Sample ID: Well #A10
Sample Matrix: Groundwater
Lab Sample ID: D1E1836-07
Collected By: Customer
Collection Date: 05/18/2021 11:35

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	<0.0106	0.0106	mg/L	1		05/19/21 1930	05/20/21 0956	CLW

Client Sample ID: Well #A10 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1E1836-08
Collected By: Customer
Collection Date: 05/18/2021 11:35

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0190**	0.0100	mg/L	1		05/18/21 1751	05/18/21 2230	DJM

Client Sample ID: Well #A11
Sample Matrix: Groundwater
Lab Sample ID: D1E1836-09
Collected By: Customer
Collection Date: 05/18/2021 12:58

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0521**	0.0106	mg/L	1		05/19/21 1930	05/20/21 0956	CLW

Client Sample ID: Well #A11 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1E1836-10
Collected By: Customer
Collection Date: 05/18/2021 12:58

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0190**	0.0100	mg/L	1		05/18/21 1751	05/18/21 2231	DJM

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DE11215	DE11215-BS1	
		DE11215-BLK1	
		D1E1836-02	Well #1S (filtered)
		DE11215-DUP1	D1E1836-02
		DE11215-MS1	D1E1836-02
		D1E1836-06	Well A9 (filtered)
		D1E1836-08	Well #A10 (filtered)
		D1E1836-10	Well #A11 (filtered)
		D1E1836-04	Well #A8 (filtered)

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DE11324	DE11324-BS1	
		DE11324-BLK1	
		DE11324-MS1	D1E1824-03
		DE11324-MS2	D1E1937-03
		D1E1836-01	Well #1S
		D1E1836-05	Well #A9
		D1E1836-07	Well #A10
		D1E1836-09	Well #A11
		DE11324-DUP1	D1E1824-03
		D1E1836-03	Well #A8

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DE11215 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DE11215-BLK1)			Prepared & Analyzed: 05/18/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DE11215-BS1)			Prepared & Analyzed: 05/18/2021							
Ortho-phosphate as P	1.02	0.0100	mg/L	1.00		102	90-110			
Duplicate (DE11215-DUP1)		**Source: D1E1836-02**	Prepared & Analyzed: 05/18/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L		ND				20	
Matrix Spike (DE11215-MS1)		**Source: D1E1836-02**	Prepared & Analyzed: 05/18/2021							
Ortho-phosphate as P	0.995	0.0100	mg/L	1.00	ND	99.4	90-110			
Batch DE11324 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DE11324-BLK1)			Prepared: 05/19/2021 Analyzed: 05/20/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DE11324-BS1)			Prepared: 05/19/2021 Analyzed: 05/20/2021							
Phosphorus - Total as P	0.996	0.0106	mg/L	1.00		99.6	90-110			

CERTIFICATE OF ANALYSIS

D1E1836

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DE11324 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Duplicate (DE11324-DUP1)		**Source: D1E1824-03**	Prepared: 05/19/2021 Analyzed: 05/20/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L		0.0329			200	20	R1
Matrix Spike (DE11324-MS1)		**Source: D1E1824-03**	Prepared: 05/19/2021 Analyzed: 05/20/2021							
Phosphorus - Total as P	1.25	0.0106	mg/L	1.25	0.0329	97.0	90-110			
Matrix Spike (DE11324-MS2)		**Source: D1E1937-03**	Prepared: 05/19/2021 Analyzed: 05/20/2021							
Phosphorus - Total as P	1.24	0.0106	mg/L	1.25	0.0723	93.3	90-110			

Definitions

mg/L: Milligrams per Liter
R1: Duplicate RPD is outside acceptance criteria.
RL: Reporting Limit
RPD: Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.9°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville
M-CT008 Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Melisa L. Montgomery
Quality Assurance Officer
Reported: 05/24/2021 16:08

MICROBAC

Microbac Laboratories, Inc.

CH/ [illegible] 61 Louis Tel: (86

D 1 E 1 8 3 6

W & C - Plymouth

FOR LAB USE ONLY

Lab WO#

Project Manager KAM

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

DELIVERY: ROBERT SCOTT

E-MAIL: RSCOTT@WOODARDCURRAN.COM

PHONE: 508-830-4159 FAX: 508-732-0238

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA

PURCHASE ORDER #

ATTENTION: ACCOUNTS PAYABLE

PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP

LOCATION: ID 11773

Wells - Monthly TP & Ortho-F

ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL

ROBERT SCOTT

PHONE: CELL - 860-204-7988

FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TOTAL PHOS.	Analysis: ORTHO-PHOS	Preservatives: NON-PRES	Preservatives: HS2O4	Preservatives: HCL	Preservatives: HNO3	Preservatives: OTHER
Well #1s (250 mL)	5/18/2021	9:15		X	WW	1	X			X			
Well # 1s (250 mL) (filtered)	5/18/2021	9:15		X	WW	1		X	X				
Well # A8 (250 mL)	5/18/2021	12:10		X	WW	1	X			X			
Well # A8 (250 mL) (filtered)	5/18/2021	12:10		X	WW	1		X	X				
Well # A9 (250 mL)	5/18/2021	10:17		X	WW	1	X			X			
Well # A9 (250 mL) (filtered)	5/18/2021	10:17		X	WW	1		X	X				
Well # A10 (250 mL)	5/18/2021	11:35		X	WW	1	X			X			
Well # A10 (250 mL) (filtered)	5/18/2021	11:35		X	WW	1		X	X				
Well # A11 (250 mL)	5/18/2021	12:58		X	WW	1	X			X			
Well # A11 (250 mL) (filtered)	5/18/2021	12:58		X	WW	1		X	X				

PRESERVATIVE VERIFIED Initials KG

CUSTODY TRANSFER	DATE	TIME
SAMPLER: Steven Whalen	5/18/21	0915
RECEIVED:		
RELINQUISHED: Steven Whalen	5/18/21	1330
RECEIVED: Keith Mann	5-18-21	1330
RELINQUISHED: Keith Mann	5-18-21	1624
RECEIVED:	5-18-21	1624

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☒ AMBIENT ☐

3.9°C KG

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1E2160

Project Description

Wells - Monthly TP & OP

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630



Quality Assurance Officer

Melisa L. Montgomery

Thursday, May 27, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

MICROBAC®

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1E2160

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Monthly TP & OP

Project / PO Number: 346346
Received: 05/20/2021
Reported: 05/27/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well #475	D1E2160-01	Groundwater	Grab		05/20/21 11:02	05/20/21 18:10
Well #475 (filtered)	D1E2160-02	Groundwater	Grab		05/20/21 11:02	05/20/21 18:10
Well #6D	D1E2160-03	Groundwater	Grab		05/20/21 10:11	05/20/21 18:10
Well #6D (filtered)	D1E2160-04	Groundwater	Grab		05/20/21 10:11	05/20/21 18:10
Well #A16	D1E2160-05	Groundwater	Grab		05/20/21 12:04	05/20/21 18:10
Well A16 (filtered)	D1E2160-06	Groundwater	Grab		05/20/21 12:04	05/20/21 18:10
Well #6S	D1E2160-07	Groundwater	Grab		05/20/21 09:07	05/20/21 18:10
Well #6S (filtered)	D1E2160-08	Groundwater	Grab		05/20/21 09:07	05/20/21 18:10

CERTIFICATE OF ANALYSIS

D1E2160

Analytical Testing Parameters

Client Sample ID: Well #475
Sample Matrix: Groundwater
Lab Sample ID: D1E2160-01
Collected By: Customer
Collection Date: 05/20/2021 11:02

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0213**	0.0106	mg/L	1		05/21/21 1900	05/24/21 1358	CLW

Client Sample ID: Well #475 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1E2160-02
Collected By: Customer
Collection Date: 05/20/2021 11:02

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0210**	0.0100	mg/L	1		05/20/21 1859	05/20/21 2012	DJM

Client Sample ID: Well #6D
Sample Matrix: Groundwater
Lab Sample ID: D1E2160-03
Collected By: Customer
Collection Date: 05/20/2021 10:11

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0181**	0.0106	mg/L	1		05/25/21 1800	05/26/21 1354	DJM

Client Sample ID: Well #6D (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1E2160-04
Collected By: Customer
Collection Date: 05/20/2021 10:11

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0230**	0.0100	mg/L	1		05/20/21 1859	05/20/21 2015	DJM

Client Sample ID: Well #A16
Sample Matrix: Groundwater
Lab Sample ID: D1E2160-05
Collected By: Customer
Collection Date: 05/20/2021 12:04

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0149**	0.0106	mg/L	1		05/25/21 1800	05/26/21 1355	DJM

CERTIFICATE OF ANALYSIS

D1E2160

Client Sample ID: Well A16 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1E2160-06
Collected By: Customer
Collection Date: 05/20/2021 12:04

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0190**	0.0100	mg/L	1		05/20/21 1859	05/20/21 2016	DJM

Client Sample ID: Well #6S
Sample Matrix: Groundwater
Lab Sample ID: D1E2160-07
Collected By: Customer
Collection Date: 05/20/2021 9:07

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0128**	0.0106	mg/L	1		05/25/21 1800	05/26/21 1355	DJM

Client Sample ID: Well #6S (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1E2160-08
Collected By: Customer
Collection Date: 05/20/2021 9:07

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0110**	0.0100	mg/L	1		05/20/21 1859	05/20/21 2016	DJM

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DE11456	DE11456-BS1	
		DE11456-BLK1	
		D1E2160-02	Well #475 (filtered)
		DE11456-DUP1	D1E2160-02
		DE11456-MS1	D1E2160-02
		D1E2160-04	Well #6D (filtered)
		D1E2160-08	Well #6S (filtered)
		D1E2160-06	Well A16 (filtered)

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DE11509	DE11509-BS1	
		DE11509-BLK1	
		DE11509-DUP1	D1E2132-03
		DE11509-MS1	D1E2132-03
		DE11509-MS2	L1E0468-01
		D1E2160-01	Well #475

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DE11663	DE11663-BS1	
		DE11663-BLK1	
		DE11663-MS2	D1E2199-03
		D1E2160-03	Well #6D
		D1E2160-07	Well #6S
		D1E2160-05	Well #A16
		DE11663-DUP1	D1E2206-02
		DE11663-MS1	D1E2206-02

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DE11456 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DE11456-BLK1)			Prepared & Analyzed: 05/20/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DE11456-BS1)			Prepared & Analyzed: 05/20/2021							
Ortho-phosphate as P	0.989	0.0100	mg/L	1.00		98.8	90-110			
Duplicate (DE11456-DUP1)	**Source: D1E2160-02**		Prepared & Analyzed: 05/20/2021							
Ortho-phosphate as P	0.0220	0.0100	mg/L		0.0210			4.65	20	
Matrix Spike (DE11456-MS1)	**Source: D1E2160-02**		Prepared & Analyzed: 05/20/2021							
Ortho-phosphate as P	1.00	0.0100	mg/L	1.00	0.0210	98.2	90-110			

CERTIFICATE OF ANALYSIS

D1E2160

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DE11509 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DE11509-BLK1)			Prepared: 05/21/2021 Analyzed: 05/24/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DE11509-BS1)			Prepared: 05/21/2021 Analyzed: 05/24/2021							
Phosphorus - Total as P	0.952	0.0106	mg/L	1.00		95.2	90-110			
Duplicate (DE11509-DUP1)		**Source: D1E2132-03**	Prepared: 05/21/2021 Analyzed: 05/24/2021							
Phosphorus - Total as P	0.0521	0.0106	mg/L		0.0563			7.84	20	
Matrix Spike (DE11509-MS1)		**Source: D1E2132-03**	Prepared: 05/21/2021 Analyzed: 05/24/2021							
Phosphorus - Total as P	1.21	0.0106	mg/L	1.25	0.0563	92.5	90-110			
Matrix Spike (DE11509-MS2)		**Source: L1E0468-01**	Prepared: 05/21/2021 Analyzed: 05/24/2021							
Phosphorus - Total as P	1.45	0.0106	mg/L	1.25	0.218	98.1	90-110			
Batch DE11663 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DE11663-BLK1)			Prepared: 05/25/2021 Analyzed: 05/26/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DE11663-BS1)			Prepared: 05/25/2021 Analyzed: 05/26/2021							
Phosphorus - Total as P	0.967	0.0106	mg/L	1.00		96.7	90-110			
Duplicate (DE11663-DUP1)		**Source: D1E2206-02**	Prepared: 05/25/2021 Analyzed: 05/26/2021							
Phosphorus - Total as P	2.27	0.0213	mg/L		2.26			0.468	20	
Matrix Spike (DE11663-MS1)		**Source: D1E2206-02**	Prepared: 05/25/2021 Analyzed: 05/26/2021							
Phosphorus - Total as P	3.53	0.0213	mg/L	1.25	2.26	102	90-110			
Matrix Spike (DE11663-MS2)		**Source: D1E2199-03**	Prepared: 05/25/2021 Analyzed: 05/26/2021							
Phosphorus - Total as P	1.28	0.0106	mg/L	1.25	0.0680	96.8	90-110			

Definitions

mg/L: Milligrams per Liter
RL: Reporting Limit
RPD: Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 1.5°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville

M-CT008 Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:

Melisa L. Montgomery

Quality Assurance Officer

Reported: 05/27/2021 16:24

MICROBAC®

Microbac Laboratories, Inc.

61 Lo
Tel:

D 1 E 2 1 6 0
W & C - Plymouth

FOR LAB USE ONLY

Lab WO#

Project Manager

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
DELIVERY: ROBERT SCOTT
E-MAIL: RSCOTT@WOODARDCURRAN.COM
PHONE: 508-830-4159 FAX: 508-732-0238

BILL TO: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA
PURCHASE ORDER #
ATTENTION: ACCOUNTS PAYABLE
PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP
LOCATION: ID 11773
Wells - Monthly TP & Ortho-F
ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL
ROBERT SCOTT
PHONE: CELL - 860-204-7988
FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TOTAL PHOS.	Analysis: ORTHO-PHOS	Preservatives: NON-PRES	Preservatives: HS2O4	Preservatives: HCL	Preservatives: HNO3	Preservatives: OTHER
Well # 475 (250 mL)	5/20/2021	11:02		X	WW	1	X			X			
Well # 475 (250 mL) (filtered)	5/20/2021	11:02		X	WW	1		X	X				
Well # 6d(250 mL)	5/20/2021	10:11		X	WW	1	X			X			
Well # 6D (250 mL) (filtered)	5/20/2021	10:11		X	WW	1		X	X				
Well # A16 (250 mL)	5/20/2021	12:04		X	WW	1	X			X			
Well # A16(250 mL) (filtered)	5/20/2021	12:04		X	WW	1		X	X				
Well # 6S(250 mL)	5/20/2021	9:07		X	WW	1	X			X			
Well # 6S(250 mL) (filtered)	5/20/2021	9:07		X	WW	1		X	X				

PRESERVATIVE VERIFIED Initials

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	5/20	
RECEIVED:		
RELINQUISHED:	5/20/21	14:05
CEIVED:	5/20/21	14:05
LINQUISHED:	5/20/21	16:10
CEIVED:	5/20/21	18:10

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☒ AMBIENT ☐ 1.5

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1F0277

Project Description

Wells - Monthly TP & OP

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630



Director

Ronald L. Warila

Tuesday, June 8, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1F0277

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Monthly TP & OP

Project / PO Number: 346346
Received: 06/02/2021
Reported: 06/08/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well #A11	D1F0277-01	Groundwater	Grab		06/02/21 12:00	06/02/21 16:05
Well #A11 (filtered)	D1F0277-02	Groundwater	Grab		06/02/21 12:00	06/02/21 16:05
Well #A16	D1F0277-03	Groundwater	Grab		06/02/21 12:38	06/02/21 16:05
Well #A16 (filtered)	D1F0277-04	Groundwater	Grab		06/02/21 12:38	06/02/21 16:05

CERTIFICATE OF ANALYSIS

D1F0277

Analytical Testing Parameters

Client Sample ID: Well #A11
Sample Matrix: Groundwater
Lab Sample ID: D1F0277-01
Collected By: Customer
Collection Date: 06/02/2021 12:00

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0223**	0.0106	mg/L	1		06/02/21 2015	06/03/21 1040	CLW

Client Sample ID: Well #A11 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1F0277-02
Collected By: Customer
Collection Date: 06/02/2021 12:00

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0220**	0.0100	mg/L	1		06/02/21 1827	06/02/21 1942	DJM

Client Sample ID: Well #A16
Sample Matrix: Groundwater
Lab Sample ID: D1F0277-03
Collected By: Customer
Collection Date: 06/02/2021 12:38

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0191**	0.0106	mg/L	1		06/02/21 2015	06/03/21 1040	CLW

Client Sample ID: Well #A16 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1F0277-04
Collected By: Customer
Collection Date: 06/02/2021 12:38

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0470**	0.0100	mg/L	1		06/02/21 1827	06/02/21 1943	DJM

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DF10176	DF10176-BS1	
		DF10176-BLK1	
		DF10176-DUP1	D1F0079-04
		D1F0277-03	Well #A16
		D1F0277-01	Well #A11
		DF10176-MS1	D1F0079-04
		DF10176-MS2	D1F0249-02

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DF10186	DF10186-BS1	
		DF10186-BLK1	
		D1F0277-02	Well #A11 (filtered)
		D1F0277-04	Well #A16 (filtered)
		DF10186-BS2	
		DF10186-BLK2	
		DF10186-DUP1	D1F0276-05
		DF10186-MS1	D1F0276-05

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DF10176 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DF10176-BLK1)			Prepared: 06/02/2021 Analyzed: 06/03/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DF10176-BS1)			Prepared: 06/02/2021 Analyzed: 06/03/2021							
Phosphorus - Total as P	0.956	0.0106	mg/L	1.00		95.6	90-110			
Duplicate (DF10176-DUP1)		**Source: D1F0079-04**	Prepared: 06/02/2021 Analyzed: 06/03/2021							
Phosphorus - Total as P	1.66	0.0106	mg/L		1.72			3.27	20	
Matrix Spike (DF10176-MS1)		**Source: D1F0079-04**	Prepared: 06/02/2021 Analyzed: 06/03/2021							
Phosphorus - Total as P	2.95	0.0213	mg/L	1.25	1.72	98.8	90-110			
Matrix Spike (DF10176-MS2)		**Source: D1F0249-02**	Prepared: 06/02/2021 Analyzed: 06/03/2021							
Phosphorus - Total as P	5.61	0.0425	mg/L	1.25	4.36	99.5	90-110			
Batch DF10186 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DF10186-BLK1)			Prepared & Analyzed: 06/02/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
Blank (DF10186-BLK2)			Prepared & Analyzed: 06/02/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DF10186-BS1)			Prepared & Analyzed: 06/02/2021							
Ortho-phosphate as P	1.00	0.0100	mg/L	1.00		100	90-110			

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1F0277

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DF10186 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
LCS (DF10186-BS2)			Prepared & Analyzed: 06/02/2021							
Ortho-phosphate as P	1.02	0.0100	mg/L	1.00		102	90-110			
Duplicate (DF10186-DUP1)		**Source: D1F0276-05**	Prepared & Analyzed: 06/02/2021							
Ortho-phosphate as P	2.84	0.0200	mg/L		2.87			0.945	20	
Matrix Spike (DF10186-MS1)		**Source: D1F0276-05**	Prepared & Analyzed: 06/02/2021							
Ortho-phosphate as P	3.85	0.0400	mg/L	1.00	2.87	97.4	90-110			

Definitions

mg/L: Milligrams per Liter
RL: Reporting Limit
RPD: Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 2.4°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville
M-CT008 Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:

Ronald L. Warila
Director
Reported: 06/08/2021 10:45

MICROBAC

C
61 Lou
Tel: (

D 1 F 0 2 7 7

W & C - Plymouth

Microbac Laboratories, Inc.

FOR LAB USE ONLY

Lab WO#

Project Manager

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
DELIVERY: ROBERT SCOTT
E-MAIL: RSCOTT@WOODARDCURRAN.COM
PHONE: 508-830-4159 FAX: 508-732-0238

BILL TO: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA
PURCHASE ORDER #
ATTENTION: ACCOUNTS PAYABLE
PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP
LOCATION: ID 11773
Wells - Monthly TP & Ortho-P
ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL
ROBERT SCOTT
PHONE: CELL - 860-204-7988
FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TOTAL PHOS.	Analysis: ORTHO-PHOS	Preservatives: NON-PRES	Preservatives: HS2O4	Preservatives: HCL	Preservatives: HNO3	Preservatives: OTHER
Well # A11 (250 mL)	6/2/2021	1200		X	WW	1	X			X			
Well # A11 (250 mL) (filtered)	6/2/2021	1200		X	WW	1		X	X				
Well # A16 (250 mL)	6/2/2021	1238		X	WW	1	X			X			
Well # A16 (250 mL) (filtered)	6/2/2021	1238		X	WW	1		X	X				

PRESERVATIVE VERIFIED
Initials

CUSTODY TRANSFER	DATE	TIME
SAMPLER: Steven Wade	6/2/21	1200
RECEIVED:	6/2/21	14:11
RELINQUISHED:	6/2/21	16:05
CEIVED:	6/2/21	1605
LINQUISHED:		
CEIVED:		

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☒ AMBIENT ☐

2.4

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1F1140

Project Description

Wells Monthly TP & OP

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630

Quality Assurance Officer

Melisa L. Montgomery

Wednesday, June 16, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1F1140

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells Monthly TP & OP

Project / PO Number: 346346
Received: 06/10/2021
Reported: 06/16/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well#A8	D1F1140-01	Groundwater	Grab		06/10/21 11:11	06/10/21 17:20
Well#A8 (filtered)	D1F1140-02	Groundwater	Grab		06/10/21 11:11	06/10/21 17:20

CERTIFICATE OF ANALYSIS

D1F1140

Analytical Testing Parameters

Client Sample ID: Well#A8
Sample Matrix: Groundwater
Lab Sample ID: D1F1140-01
Collected By: Customer
Collection Date: 06/10/2021 11:11

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**1.98**	0.0213	mg/L	2		06/10/21 1830	06/14/21 1258	CLW

Client Sample ID: Well#A8 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1F1140-02
Collected By: Customer
Collection Date: 06/10/2021 11:11

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**2.01**	0.0200	mg/L	2		06/10/21 1856	06/10/21 2143	DJM

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DF10763	DF10763-BS1	
		DF10763-BLK1	
		DF10763-MS1	D1F1118-02
		DF10763-DUP1	D1F1118-02
		DF10763-MS2	D1F1167-05
		D1F1140-01	Well#A8

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DF10781	DF10781-BS1	
		DF10781-BLK1	
		DF10781-DUP1	D1F1138-03
		DF10781-MS1	D1F1138-03
		D1F1140-02	Well#A8 (filtered)
		DF10781-MS2	D1F1138-06

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DF10763 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DF10763-BLK1)			Prepared: 06/10/2021 Analyzed: 06/14/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DF10763-BS1)			Prepared: 06/10/2021 Analyzed: 06/14/2021							
Phosphorus - Total as P	0.984	0.0106	mg/L	1.00		98.4	90-110			
Duplicate (DF10763-DUP1)		**Source: D1F1118-02**	Prepared: 06/10/2021 Analyzed: 06/14/2021							
Phosphorus - Total as P	0.0701	0.0106	mg/L		0.0691			1.53	20	
Matrix Spike (DF10763-MS1)		**Source: D1F1118-02**	Prepared: 06/10/2021 Analyzed: 06/14/2021							
Phosphorus - Total as P	1.34	0.0106	mg/L	1.25	0.0691	101	90-110			
Matrix Spike (DF10763-MS2)		**Source: D1F1167-05**	Prepared: 06/10/2021 Analyzed: 06/14/2021							
Phosphorus - Total as P	1.22	0.0106	mg/L	1.25	0.0861	90.4	90-110			
Batch DF10781 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DF10781-BLK1)			Prepared & Analyzed: 06/10/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DF10781-BS1)			Prepared & Analyzed: 06/10/2021							
Ortho-phosphate as P	1.02	0.0100	mg/L	1.00		102	90-110			
Duplicate (DF10781-DUP1)		**Source: D1F1138-03**	Prepared & Analyzed: 06/10/2021							
Ortho-phosphate as P	2.46	0.0200	mg/L		2.48			0.971	20	
Matrix Spike (DF10781-MS1)		**Source: D1F1138-03**	Prepared & Analyzed: 06/10/2021							
Ortho-phosphate as P	3.46	0.0200	mg/L	1.00	2.48	97.1	90-110			
Matrix Spike (DF10781-MS2)		**Source: D1F1138-06**	Prepared & Analyzed: 06/10/2021							

CERTIFICATE OF ANALYSIS

D1F1140

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DF10781 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Matrix Spike (DF10781-MS2)	**Source: D1F1138-06**		Prepared & Analyzed: 06/10/2021							
Ortho-phosphate as P	5.16	0.0400	mg/L	1.00	4.21	94.6	90-110			

Definitions

mg/L: Milligrams per Liter
RL: Reporting Limit
RPD: Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.6°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville
M-CT008 Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Melisa L. Montgomery
Quality Assurance Officer
Reported: 06/16/2021 15:44

MICROBAC

Microbac Laboratories, Inc.

D 1 F 1 1 4 0

W & C - Plymouth

FOR LAB USE ONLY

Lab WO#

Project Manager

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA 02360

DELIVERY: ROBERT SCOTT

E-MAIL: RSCOTT@WOODARDCURRAN.COM

PHONE: 508-830-4159 FAX: 508-732-0238

Invoice To

[illegible], INC.

ADDRESS: 131 CAMELOT DRIVE

PLYMOUTH, MA

PURCHASE ORDER #

ATTENTION: ACCOUNTS PAYABLE

PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP

LOCATION: ID 11773

Wells - Monthly TP & Ortho-P

ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL

ROBERT SCOTT

PHONE: CELL - 860-204-7988

FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TOTAL PHOS.	Analysis: ORTHO-PHOS	Preservatives: NON-PRES	Preservatives: HS2O4	Preservatives: HCL	Preservatives: HNO3	Preservatives: OTHER
Well # A8 (250 mL)	6/10/21	11:11		X	WW	1	X			X			
Well # A8 (250 mL) (filtered)	6/10/21	11:11		X	WW	1		X	X				

PRESERVATIVE VERIFIED Initials

CUSTODY TRANSFER	DATE	TIME
SAMPLER: Robert Scott	6/10/21	1340
RECEIVED:		
RELINQUISHED:		
ECEIVED:	6/10/2021	1340
ELINQUISHED:	6.10.21	1720
ECEIVED:	6.10.21	1700

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☐ AMBIENT ☐

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1F2233

Project Description

Wells - Monthly TO & OP

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630



Quality Assurance Officer

Melisa L. Montgomery

Monday, June 28, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

MICROBAC®

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1F2233

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Monthly TO & OP

Project / PO Number: 346346
Received: 06/23/2021
Reported: 06/28/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well #A9	D1F2233-01	Groundwater	Grab		06/23/21 09:25	06/23/21 17:00
Well #A9 (filtered)	D1F2233-02	Groundwater	Grab		06/23/21 09:25	06/23/21 17:00
Well #A10	D1F2233-03	Groundwater	Grab		06/23/21 10:04	06/23/21 17:00
Well #A10 (filtered)	D1F2233-04	Groundwater	Grab		06/23/21 10:04	06/23/21 17:00
Well #1S	D1F2233-05	Groundwater	Grab		06/23/21 08:42	06/23/21 17:00
Well #1S (filtered)	D1F2233-06	Groundwater	Grab		06/23/21 08:42	06/23/21 17:00
Well #475	D1F2233-07	Groundwater	Grab		06/23/21 11:34	06/23/21 17:00
Well #475 (filtered)	D1F2233-08	Groundwater	Grab		06/23/21 11:34	06/23/21 17:00
Well #6D	D1F2233-09	Groundwater	Grab		06/23/21 11:07	06/23/21 17:00
Well #6D (filtered)	D1F2233-10	Groundwater	Grab		06/23/21 11:07	06/23/21 17:00

CERTIFICATE OF ANALYSIS

D1F2233

Analytical Testing Parameters

Client Sample ID: Well #A9
Sample Matrix: Groundwater
Lab Sample ID: D1F2233-01
Collected By: Customer
Collection Date: 06/23/2021 9:25

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0266**	0.0106	mg/L	1		06/24/21 2000	06/25/21 1431	DJM

Client Sample ID: Well #A9 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1F2233-02
Collected By: Customer
Collection Date: 06/23/2021 9:25

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0280**	0.0100	mg/L	1		06/23/21 1901	06/23/21 2020	DJM

Client Sample ID: Well #A10
Sample Matrix: Groundwater
Lab Sample ID: D1F2233-03
Collected By: Customer
Collection Date: 06/23/2021 10:04

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	<0.0106	0.0106	mg/L	1		06/24/21 2000	06/25/21 1444	DJM

Client Sample ID: Well #A10 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1F2233-04
Collected By: Customer
Collection Date: 06/23/2021 10:04

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0150**	0.0100	mg/L	1		06/23/21 1901	06/23/21 2023	DJM

Client Sample ID: Well #1S
Sample Matrix: Groundwater
Lab Sample ID: D1F2233-05
Collected By: Customer
Collection Date: 06/23/2021 8:42

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0106**	0.0106	mg/L	1		06/24/21 2000	06/25/21 1445	DJM

CERTIFICATE OF ANALYSIS

D1F2233

Client Sample ID: Well #1S (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1F2233-06
Collected By: Customer
Collection Date: 06/23/2021 8:42

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0170**	0.0100	mg/L	1		06/23/21 1901	06/23/21 2024	DJM

Client Sample ID: Well #475
Sample Matrix: Groundwater
Lab Sample ID: D1F2233-07
Collected By: Customer
Collection Date: 06/23/2021 11:34

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0159**	0.0106	mg/L	1		06/24/21 2000	06/25/21 1446	DJM

Client Sample ID: Well #475 (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1F2233-08
Collected By: Customer
Collection Date: 06/23/2021 11:34

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0290**	0.0100	mg/L	1		06/23/21 1901	06/23/21 2025	DJM

Client Sample ID: Well #6D
Sample Matrix: Groundwater
Lab Sample ID: D1F2233-09
Collected By: Customer
Collection Date: 06/23/2021 11:07

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0149**	0.0106	mg/L	1		06/24/21 2000	06/25/21 1446	DJM

Client Sample ID: Well #6D (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1F2233-10
Collected By: Customer
Collection Date: 06/23/2021 11:07

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0170**	0.0100	mg/L	1		06/23/21 1901	06/23/21 2025	DJM

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DF11568	DF11568-BLK1	
		DF11568-BS1	
		DF11568-DUP1	D1F2233-02
		D1F2233-02	Well #A9 (filtered)
		D1F2233-04	Well #A10 (filtered)
		DF11568-MS1	D1F2233-02
		D1F2233-06	Well #1S (filtered)
		DF11568-MS2	D1F2233-04
		D1F2233-10	Well #6D (filtered)
		D1F2233-08	Well #475 (filtered)
		DF11568-BS2	
		DF11568-BLK2	

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DF11633	DF11633-BLK1	
		DF11633-BS1	
		D1F2233-01	Well #A9
		DF11633-MS1	D1F2233-01
		DF11633-DUP1	D1F2233-01
		DF11633-MS2	D1F2294-04
		D1F2233-03	Well #A10
		D1F2233-05	Well #1S
		D1F2233-09	Well #6D
		D1F2233-07	Well #475

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DF11568 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DF11568-BLK1)			Prepared & Analyzed: 06/23/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
Blank (DF11568-BLK2)			Prepared & Analyzed: 06/23/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DF11568-BS1)			Prepared & Analyzed: 06/23/2021							
Ortho-phosphate as P	1.00	0.0100	mg/L	1.00		100	90-110			
LCS (DF11568-BS2)			Prepared & Analyzed: 06/23/2021							
Ortho-phosphate as P	1.01	0.0100	mg/L	1.00		101	90-110			
Duplicate (DF11568-DUP1)	**Source: D1F2233-02**		Prepared & Analyzed: 06/23/2021							
Ortho-phosphate as P	0.0270	0.0100	mg/L		0.0280			3.64	20	
Matrix Spike (DF11568-MS1)	**Source: D1F2233-02**		Prepared & Analyzed: 06/23/2021							

CERTIFICATE OF ANALYSIS

D1F2233

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DF11568 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Matrix Spike (DF11568-MS1)		**Source: D1F2233-02**	Prepared & Analyzed: 06/23/2021							
Ortho-phosphate as P	0.973	0.0100	mg/L	1.00	0.0280	94.5	90-110			
Matrix Spike (DF11568-MS2)		**Source: D1F2233-04**	Prepared & Analyzed: 06/23/2021							
Ortho-phosphate as P	1.03	0.0100	mg/L	1.00	0.0150	101	90-110			
Batch DF11633 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DF11633-BLK1)			Prepared: 06/24/2021 Analyzed: 06/25/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DF11633-BS1)			Prepared: 06/24/2021 Analyzed: 06/25/2021							
Phosphorus - Total as P	1.01	0.0106	mg/L	1.00		101	90-110			
Duplicate (DF11633-DUP1)		**Source: D1F2233-01**	Prepared: 06/24/2021 Analyzed: 06/25/2021							
Phosphorus - Total as P	0.0255	0.0106	mg/L		0.0266			4.08	20	
Matrix Spike (DF11633-MS1)		**Source: D1F2233-01**	Prepared: 06/24/2021 Analyzed: 06/25/2021							
Phosphorus - Total as P	1.28	0.0106	mg/L	1.25	0.0266	100	90-110			
Matrix Spike (DF11633-MS2)		**Source: D1F2294-04**	Prepared: 06/24/2021 Analyzed: 06/25/2021							
Phosphorus - Total as P	1.37	0.0106	mg/L	1.25	0.0754	103	90-110			

Definitions

mg/L: Milligrams per Liter
RL: Reporting Limit
RPD: Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.9°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville
M-CT008 Massachusetts Department of Environmental Protection

CERTIFICATE OF ANALYSIS

D1F2233

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Melisa L. Montgomery
Quality Assurance Officer
Reported: 06/28/2021 15:46

MICROBAC

Microbac Laboratories, Inc.

CHAIN OF CUSTODY FORM

61 Louisa Viens Drive - Dayville, CT 06241
Tel: (860)774-6814 - Fax: (860)774-2689

D 1 F 2 2 3 3

W & C - Plymouth

Copy of Report To		Billing Information		Project Information	
CUSTOMER:	WOODARD & CURRAN, INC.	BILL TO:	WOODARD & CURRAN, INC.	PROJECT:	PLYMOUTH, MA WWTP
ADDRESS:	131 CAMELOT DRIVE	ADDRESS:	131 CAMELOT DRIVE	LOCATION:	ID 11773
	PLYMOUTH, MA 02360		PLYMOUTH, MA		Wells - Monthly TP & Ortho-P
DELIVERY:	ROBERT SCOTT	PURCHASE ORDER #		ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL.	ROBERT SCOTT
E-MAIL:	[redacted]	ATTENTION:	ACCOUNTS PAYABLE	PHONE:	CELL - 860-204-7988
PHONE:	508-830-4159 FAX: 508-732-0238	PHONE:	508-830-4159	FAX:	508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TOTAL PHOS.	Analysis: ORTHO-PHOS	Preservatives: NON-PRES	Preservatives: HS2O4	Preservatives: HCL	Preservatives: HNO3	Preservatives: OTHER
Well # A9 (250 mL)	6/23/2021	9:25		X	WW	1	X			X			
Well # A9 (250 mL) (filtered)	6/23/2021	9:25		X	WW	1		X	X				
Well # A10 (250 mL)	6/23/2021	10:04		X	WW	1	X			X			
Well # A10 (250 mL) (filtered)	6/23/2021	10:04		X	WW	1		X	X				
Well # 1S (250 mL)	6/23/2021	8:42		X	WW	1	X			X			
Well # 1S (250 mL) (filtered)	6/23/2021	8:42		X	WW	1		X	X				
Well # 475 (250 mL)	6/23/2021	11:34		X	WW	1	X			X			
Well # 475 (250 mL) (filtered)	6/23/2021	11:34		X	WW	1		X	X				
Well # 6D (250 mL)	6/23/2021	11:07		X	WW	1	X			X			
Well # 6D (250 mL) (filtered)	6/23/2021	11:07		X	WW	1		X	X				

PRESERVATIVE VERIFIED Initials

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	6/23/21	11:07
RECEIVED:	6/23/21	1505
RELINQUISHED:	6/23/21	1725
CEIVED:	6/23/21	1725
LINQUISHED:		
CEIVED:		

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☑ AMBIENT ☐ 3.9 °C

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1F2234

Project Description

Wells - Monthly TO & OP

For:

Robert Scott

Woodard & Curran, Inc. - Plymouth

131 Camelot Drive

Plymouth, MA 02630



Quality Assurance Officer

Melisa L. Montgomery

Monday, June 28, 2021

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc. - Dayville. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

MICROBAC®

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1F2234

Woodard & Curran, Inc. - Plymouth

Robert Scott
131 Camelot Drive
Plymouth, MA 02630

Project Name: Wells - Monthly TO & OP

Project / PO Number: 346346
Received: 06/23/2021
Reported: 06/28/2021

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
Well #6S	D1F2234-01	Groundwater	Grab		06/23/21 10:40	06/23/21 17:25
Well #6S (filtered)	D1F2234-02	Groundwater	Grab		06/23/21 10:40	06/23/21 17:25

CERTIFICATE OF ANALYSIS

D1F2234

Analytical Testing Parameters

Client Sample ID: Well #6S
Sample Matrix: Groundwater
Lab Sample ID: D1F2234-01
Collected By: Customer
Collection Date: 06/23/2021 10:40

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Phosphorus - Total as P	**0.0106**	0.0106	mg/L	1		06/24/21 2000	06/25/21 1555	DJM

Client Sample ID: Well #6S (filtered)
Sample Matrix: Groundwater
Lab Sample ID: D1F2234-02
Collected By: Customer
Collection Date: 06/23/2021 10:40

Inorganics Total	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 365.1, Rv. 2 (1993)								
Ortho-phosphate as P	**0.0280**	0.0100	mg/L	1		06/23/21 1901	06/23/21 2026	DJM

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DF11568	DF11568-BS1	
		DF11568-BLK1	
		DF11568-DUP1	D1F2233-02
		DF11568-MS1	D1F2233-02
		DF11568-MS2	D1F2233-04
		D1F2234-02	Well #6S (filtered)
		DF11568-BS2	
		DF11568-BLK2	

Method	Batch	Laboratory ID	Client / Source ID
EPA 365.1, Rv. 2 (1993)	DF11640	DF11640-BS1	
		DF11640-BLK1	
		DF11640-DUP1	D1F2347-05
		DF11640-MS1	D1F2347-05
		D1F2234-01	Well #6S
		DF11640-MS2	D1F2404-03

Batch Quality Control Summary: Microbac Laboratories, Inc. - Dayville

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DF11568 - Wet Chem - W - EPA 365.1, Rv. 2 (1993)										
Blank (DF11568-BLK1)			Prepared & Analyzed: 06/23/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
Blank (DF11568-BLK2)			Prepared & Analyzed: 06/23/2021							
Ortho-phosphate as P	<0.0100	0.0100	mg/L							
LCS (DF11568-BS1)			Prepared & Analyzed: 06/23/2021							
Ortho-phosphate as P	1.00	0.0100	mg/L	1.00		100	90-110			
LCS (DF11568-BS2)			Prepared & Analyzed: 06/23/2021							
Ortho-phosphate as P	1.01	0.0100	mg/L	1.00		101	90-110			
Duplicate (DF11568-DUP1)	**Source: D1F2233-02**		Prepared & Analyzed: 06/23/2021							
Ortho-phosphate as P	0.0270	0.0100	mg/L		0.0280			3.64	20	
Matrix Spike (DF11568-MS1)	**Source: D1F2233-02**		Prepared & Analyzed: 06/23/2021							
Ortho-phosphate as P	0.973	0.0100	mg/L	1.00	0.0280	94.5	90-110			
Matrix Spike (DF11568-MS2)	**Source: D1F2233-04**		Prepared & Analyzed: 06/23/2021							
Ortho-phosphate as P	1.03	0.0100	mg/L	1.00	0.0150	101	90-110			
Batch DF11640 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
Blank (DF11640-BLK1)			Prepared: 06/24/2021 Analyzed: 06/25/2021							
Phosphorus - Total as P	<0.0106	0.0106	mg/L							
LCS (DF11640-BS1)			Prepared: 06/24/2021 Analyzed: 06/25/2021							

MICROBAC®

Microbac Laboratories, Inc. - Dayville

CERTIFICATE OF ANALYSIS

D1F2234

Inorganics Total	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch DF11640 - Wet-Digestion-W - EPA 365.1, Rv. 2 (1993)										
LCS (DF11640-BS1)			Prepared: 06/24/2021 Analyzed: 06/25/2021							
Phosphorus - Total as P	1.02	0.0106	mg/L	1.00		102	90-110			
Duplicate (DF11640-DUP1)		**Source: D1F2347-05**	Prepared: 06/24/2021 Analyzed: 06/25/2021							
Phosphorus - Total as P	0.103	0.0106	mg/L		0.102			1.04	20	
Matrix Spike (DF11640-MS1)		**Source: D1F2347-05**	Prepared: 06/24/2021 Analyzed: 06/25/2021							
Phosphorus - Total as P	1.33	0.0106	mg/L	1.25	0.102	98.2	90-110			
Matrix Spike (DF11640-MS2)		**Source: D1F2404-03**	Prepared: 06/24/2021 Analyzed: 06/25/2021							
Phosphorus - Total as P	1.29	0.0106	mg/L	1.25	0.0478	99.3	90-110			

Definitions

mg/L: Milligrams per Liter
RL: Reporting Limit
RPD: Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.9°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

Project Requested Certification(s)

Microbac Laboratories, Inc. - Dayville
M-CT008 Massachusetts Department of Environmental Protection

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:



Melisa L. Montgomery
Quality Assurance Officer
Reported: 06/28/2021 15:47

MICROBAC

CHAIN OF CUSTODY FORM

61 Louisa Viens Drive - Dayville, CT 06241
Tel: (860)774-6814 - Fax: (860)774-2689

D 1 F 2 2 3 4

W & C - Plymouth

Microbac Laboratories, Inc.

Copy of Report To		Billing Information		Project Information	
CUSTOMER:	WOODARD & CURRAN, INC.	BILL TO:	WOODARD & CURRAN, INC.	PROJECT:	PLYMOUTH, MA WWTP
ADDRESS:	131 CAMELOT DRIVE	ADDRESS:	131 CAMELOT DRIVE	LOCATION:	ID 11773
	PLYMOUTH, MA 02360		PLYMOUTH, MA		Wells - Monthly TP & Ortho-P
DELIVERY:	ROBERT SCOTT	PURCHASE ORDER #		ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL	ROBERT SCOTT
E-MAIL:	[illegible]	ATTENTION:	ACCOUNTS PAYABLE	PHONE:	CELL - 860-204-7988
PHONE:	508-830-4159 FAX: 508-732-0238	PHONE:	508-830-4159	FAX:	508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TOTAL PHOS.	Analysis: ORTHO-PHOS	Preservatives: NON-PRES	Preservatives: HS2O4	Preservatives: HCL	Preservatives: HNO3	Preservatives: OTHER
Well # 6S (250 mL)	6/23/2021	10:40		X	WW	1	X			X			
Well # 6S (250 mL) (filtered)	6/23/2021	10:40		X	WW	1		X	X				

PRESERVATIVE VERIFIED Initials

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	6/23/21	10:40
RECEIVED:	6/23/21	1505
RELINQUISHED:	6/23/21	1725
CEIVED:	6/23/21	1725
LINQUISHED:		
CEIVED:		

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☒ AMBIENT ☐ 3.9°C

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Woodard & Curran, Inc.
Attn: Robert Blanchard
131 Camelot Drive
Plymouth, MA 02360

Date Received: 7/21/2021
Date Reported: 7/29/2021
P.O. Number

Work Order #: 2107-12167

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2107-12167

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 001
Sample Description: WELL # A11
Sample Type : GRAB
Sample Date / Time : 7/21/2021 @ 09:38

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TKN (as N)	<0.50	0.50	mg/l	SM4500NOrg-D 18-21ed	7/27/2021	14:30	RPK
Total Phosphorus (as P)	<0.010	0.010	mg/l	SM4500P-B,E-2011	7/27/2021	12:44	TML
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	7/22/2021	22:25	KPG
Nitrite (as N)	0.081	0.050	mg/l	EPA 300.0	7/22/2021	16:44	KPG
Nitrate (as N)	0.58	0.050	mg/l	EPA 300.0	7/22/2021	16:44	KPG
Chloride	140	1.0	mg/l	EPA 300.0	7/22/2021	16:44	KPG
Alkalinity (as CaCO3)	12	1.0	mg/l	SM2320B 18-21ed	7/22/2021	15:39	JEP
Volatile Organic Compounds							
Chloromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Bromomethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Vinyl Chloride	<0.40	0.40	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Chloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Methylene Chloride	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Trichlorofluoromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
1,1-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
1,1-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
trans-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Chloroform	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
1,2-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
1,1,1-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Carbon Tetrachloride	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Bromodichloromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
1,2-Dichloropropane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
cis-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Trichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
trans-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	7/22/2021	10:52	SAR
1,1,2-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Dibromochloromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Bromoform	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Tetrachloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Chlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
2-Chloroethyl vinyl ether	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
1,2-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
1,3-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
1,4-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Dichlorobenzenes	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Benzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Toluene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Ethylbenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2107-12167

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 001
Sample Description: WELL # A11
Sample Type : GRAB
Sample Date / Time : 7/21/2021 @ 09:38

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
o-Xylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
m,p-Xylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Acetone	<10	10	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Acrolein	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Acrylonitrile	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Methyl Tertiary Butyl Ether (MTBE)	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Carbon Disulfide	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Styrene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Vinyl Acetate	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
4-methyl-2-pentanone(MIBK)	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
2-Hexanone	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
2-Butanone(MEK)	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
cis-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
1,2-Dibromoethane(EDB)	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Dibromomethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Bromochloromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	10:52	SAR
Surrogates			RANGE	EPA 624.1	7/22/2021	10:52	SAR
Dibromofluoromethane	98		80-120%	EPA 624.1	7/22/2021	10:52	SAR
Toluene-D8	99		80-120%	EPA 624.1	7/22/2021	10:52	SAR
4-Bromofluorobenzene	98		80-120%	EPA 624.1	7/22/2021	10:52	SAR
Total Metals							
Boron	<0.050	0.050	mg/l	EPA 200.7	7/27/2021	10:58	CEV
Copper	<0.025	0.025	mg/l	EPA 200.7	7/23/2021	13:02	CEV
Sodium	62	2.5	mg/l	EPA 200.7	7/27/2021	10:58	CEV
ICP Digestion				EPA 200.7	7/23/2021	12:03	BB

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2107-12167

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 002
Sample Description: WELL # 475
Sample Type : GRAB
Sample Date / Time : 7/21/2021 @ 09:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TKN (as N)	<0.50	0.50	mg/l	SM4500NOrg-D 18-21ed	7/27/2021	14:30	RPK
Total Phosphorus (as P)	0.015	0.010	mg/l	SM4500P-B,E-2011	7/27/2021	12:44	TML
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	7/22/2021	22:25	KPG
Nitrite (as N)	<0.050	0.050	mg/l	EPA 300.0	7/22/2021	17:19	KPG
Nitrate (as N)	2.0	0.050	mg/l	EPA 300.0	7/22/2021	17:19	KPG
Chloride	95	1.0	mg/l	EPA 300.0	7/22/2021	17:19	KPG
Alkalinity (as CaCO3)	4.1	1.0	mg/l	SM2320B 18-21ed	7/22/2021	15:39	JEP
Volatile Organic Compounds							
Chloromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Bromomethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Vinyl Chloride	<0.40	0.40	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Chloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Methylene Chloride	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Trichlorofluoromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
1,1-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
1,1-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
trans-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Chloroform	1.4	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
1,2-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
1,1,1-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Carbon Tetrachloride	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Bromodichloromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
1,2-Dichloropropane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
cis-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Trichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
trans-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	7/22/2021	11:15	SAR
1,1,2-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Dibromochloromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Bromoform	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Tetrachloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Chlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
2-Chloroethyl vinyl ether	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
1,2-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
1,3-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
1,4-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Dichlorobenzenes	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Benzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Toluene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Ethylbenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2107-12167

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 002
Sample Description: WELL # 475
Sample Type : GRAB
Sample Date / Time : 7/21/2021 @ 09:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
o-Xylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
m,p-Xylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Acetone	<10	10	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Acrolein	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Acrylonitrile	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Methyl Tertiary Butyl Ether (MTBE)	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Carbon Disulfide	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Styrene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Vinyl Acetate	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
4-methyl-2-pentanone(MIBK)	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
2-Hexanone	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
2-Butanone(MEK)	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
cis-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
1,2-Dibromoethane(EDB)	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Dibromomethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Bromochloromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:15	SAR
Surrogates			RANGE	EPA 624.1	7/22/2021	11:15	SAR
Dibromofluoromethane	99		80-120%	EPA 624.1	7/22/2021	11:15	SAR
Toluene-D8	99		80-120%	EPA 624.1	7/22/2021	11:15	SAR
4-Bromofluorobenzene	98		80-120%	EPA 624.1	7/22/2021	11:15	SAR
Total Metals							
Boron	<0.050	0.050	mg/l	EPA 200.7	7/27/2021	11:00	CEV
Copper	<0.025	0.025	mg/l	EPA 200.7	7/23/2021	13:03	CEV
Sodium	42	2.5	mg/l	EPA 200.7	7/27/2021	11:00	CEV
ICP Digestion				EPA 200.7	7/23/2021	12:03	BB

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2107-12167

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 003
Sample Description: WELL # 6D
Sample Type : GRAB
Sample Date / Time : 7/21/2021 @ 08:43

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TKN (as N)	<0.50	0.50	mg/l	SM4500NOrg-D 18-21ed	7/27/2021	14:30	JMD
Total Phosphorus (as P)	0.013	0.010	mg/l	SM4500P-B,E-2011	7/27/2021	12:44	TML
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	7/22/2021	22:25	KPG
Nitrite (as N)	0.060	0.050	mg/l	EPA 300.0	7/22/2021	17:31	KPG
Nitrate (as N)	2.0	0.050	mg/l	EPA 300.0	7/22/2021	17:31	KPG
Chloride	87	1.0	mg/l	EPA 300.0	7/22/2021	17:31	KPG
Alkalinity (as CaCO3)	6.2	1.0	mg/l	SM2320B 18-21ed	7/22/2021	15:39	JEP
Volatile Organic Compounds							
Chloromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Bromomethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Vinyl Chloride	<0.40	0.40	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Chloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Methylene Chloride	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Trichlorofluoromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
1,1-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
1,1-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
trans-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Chloroform	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
1,2-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
1,1,1-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Carbon Tetrachloride	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Bromodichloromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
1,2-Dichloropropane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
cis-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Trichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
trans-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	7/22/2021	11:39	SAR
1,1,2-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Dibromochloromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Bromoform	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Tetrachloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Chlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
2-Chloroethyl vinyl ether	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
1,2-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
1,3-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
1,4-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Dichlorobenzenes	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Benzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Toluene	1.5	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Ethylbenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2107-12167

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 003
Sample Description: WELL # 6D
Sample Type : GRAB
Sample Date / Time : 7/21/2021 @ 08:43

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
o-Xylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
m,p-Xylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Acetone	<10	10	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Acrolein	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Acrylonitrile	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Methyl Tertiary Butyl Ether (MTBE)	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Carbon Disulfide	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Styrene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Vinyl Acetate	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
4-methyl-2-pentanone(MIBK)	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
2-Hexanone	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
2-Butanone(MEK)	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
cis-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
1,2-Dibromoethane(EDB)	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Dibromomethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Bromochloromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	11:39	SAR
Surrogates			RANGE	EPA 624.1	7/22/2021	11:39	SAR
Dibromofluoromethane	99		80-120%	EPA 624.1	7/22/2021	11:39	SAR
Toluene-D8	100		80-120%	EPA 624.1	7/22/2021	11:39	SAR
4-Bromofluorobenzene	97		80-120%	EPA 624.1	7/22/2021	11:39	SAR
Total Metals							
Boron	<0.050	0.050	mg/l	EPA 200.7	7/27/2021	11:01	CEV
Copper	<0.025	0.025	mg/l	EPA 200.7	7/23/2021	13:05	CEV
Sodium	27	2.5	mg/l	EPA 200.7	7/27/2021	11:01	CEV
ICP Digestion				EPA 200.7	7/23/2021	12:03	BB

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2107-12167

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 004
Sample Description: WELL # 6S
Sample Type : GRAB
Sample Date / Time : 7/21/2021 @ 08:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TKN (as N)	<0.50	0.50	mg/l	SM4500NOrg-D 18-21ed	7/27/2021	14:30	JMD
Total Phosphorus (as P)	0.012	0.010	mg/l	SM4500P-B,E-2011	7/27/2021	12:44	TML
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	7/22/2021	22:25	KPG
Nitrite (as N)	0.063	0.050	mg/l	EPA 300.0	7/22/2021	17:43	KPG
Nitrate (as N)	1.3	0.050	mg/l	EPA 300.0	7/22/2021	17:43	KPG
Chloride	27	1.0	mg/l	EPA 300.0	7/22/2021	17:43	KPG
Alkalinity (as CaCO3)	4.1	1.0	mg/l	SM2320B 18-21ed	7/22/2021	15:39	JEP
Volatile Organic Compounds							
Chloromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Bromomethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Vinyl Chloride	<0.40	0.40	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Chloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Methylene Chloride	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Trichlorofluoromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
1,1-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
1,1-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
trans-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Chloroform	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
1,2-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
1,1,1-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Carbon Tetrachloride	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Bromodichloromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
1,2-Dichloropropane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
cis-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Trichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
trans-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	7/22/2021	12:02	SAR
1,1,2-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Dibromochloromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Bromoform	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Tetrachloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Chlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
2-Chloroethyl vinyl ether	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
1,2-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
1,3-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
1,4-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Dichlorobenzenes	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Benzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Toluene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Ethylbenzene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2107-12167

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 004
Sample Description: WELL # 6S
Sample Type : GRAB
Sample Date / Time : 7/21/2021 @ 08:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
o-Xylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
m,p-Xylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Acetone	<10	10	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Acrolein	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Acrylonitrile	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Methyl Tertiary Butyl Ether (MTBE)	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Carbon Disulfide	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Styrene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Vinyl Acetate	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
4-methyl-2-pentanone(MIBK)	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
2-Hexanone	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
2-Butanone(MEK)	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
cis-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
1,2-Dibromoethane(EDB)	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Dibromomethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Bromochloromethane	<1.0	1.0	ug/l	EPA 624.1	7/22/2021	12:02	SAR
Surrogates			RANGE	EPA 624.1	7/22/2021	12:02	SAR
Dibromofluoromethane	100		80-120%	EPA 624.1	7/22/2021	12:02	SAR
Toluene-D8	101		80-120%	EPA 624.1	7/22/2021	12:02	SAR
4-Bromofluorobenzene	98		80-120%	EPA 624.1	7/22/2021	12:02	SAR
Total Metals							
Boron	<0.050	0.050	mg/l	EPA 200.7	7/27/2021	11:11	CEV
Copper	<0.025	0.025	mg/l	EPA 200.7	7/23/2021	13:16	CEV
Sodium	14	2.5	mg/l	EPA 200.7	7/27/2021	11:11	CEV
ICP Digestion				EPA 200.7	7/23/2021	12:03	BB

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

MICROBAC

Microbac Laboratories, Inc.

CHAIN OF CUSTODY FORM

61 Louisa Viens Drive - Dayville, CT 06241
Tel: (860)774-6814 - Fax: (860)774-2689

R.J.

FOR LAB USE ONLY
Lab WO#
Project Manager

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
DELIVERY: ROBERT BLANCHARD
E-MAIL: robert.blanchard@veolia.com
PHONE: 508-830-4159 FAX: 508-732-0238

Billing Information

BILL TO: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
PURCHASE ORDER #
ATTENTION: ACCOUNTS PAYABLE
PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP
LOCATION: ID 11773
WELLS - QUARTERLY
ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL
ROBERT SCOTT
PHONE: CELL - 860-204-7988
FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # A11 (250 mL)	7/21/2021	9:38		X	WW	1	X	X											X			
Well # A11 (250 mL)	7/21/2021	9:38		X	WW	1			X	X								X				
Well # A11 (250 mL)(filtered)	7/21/2021	9:38		X	WW	1					X							X				
Well # A11 (250 mL)	7/21/2021	9:38		X	WW	1						X						X				
Well # A11 (250 mL)	7/21/2021	9:38		X	WW	1							X					X				
Well # A11 (250 mL)	7/21/2021	9:38		X	WW	1								X	X	X					X	
Well # ~~A11~~ (40 mL vial) A11	7/21/2021	9:38		X	WW	2											X	X				
Well # ~~A11~~ (40 mL vial) A11	7/21/2021	9:38		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	7/21/21	14:34
RECEIVED:	7/21/21	1449
RELINQUISHED:	7/21/21	1705
RECEIVED:	7-21-21	1705
RELINQUISHED:		
RECEIVED:		

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☐ AMBIENT ☐

2107-121167

pg 10 of 13

pg 1084

MICROBAC I

Microbac Laboratories, Inc.

CHAIN OF CUSTODY FORM

61 Louisa Viens Drive - Dayville, CT 06241
Tel: (860)774-6814 - Fax: (860)774-2689

FOR LAB USE ONLY

Lab WO#

Project Manager

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
DELIVERY: ROBERT BLANCHARD
E-MAIL: robert.blanchard@veolia.com
PHONE: 508-830-4159 FAX: 508-732-0238

Billing Information

BILL TO: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
PURCHASE ORDER #
ATTENTION: ACCOUNTS PAYABLE
PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP
LOCATION: ID 11773
WELLS - QUARTERLY
ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL
ROBERT SCOTT
PHONE: CELL - 860-204-7988
FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS204	HCL	HNO3	OTHER
Well # 475 (250 mL)	7/21/2021	9:15		X	WW	1	X	X											X			
Well # 475 (250 mL)	7/21/2021	9:15		X	WW	1			X	X								X				
Well # 475 (250 mL)(filtered)	7/21/2021	9:15		X	WW	1					X							X				
Well # 475 (250 mL)	7/21/2021	9:15		X	WW	1						X						X				
Well # 475 (250 mL)	7/21/2021	9:15		X	WW	1							X					X				
Well # 475 (250 mL)	7/21/2021	9:15		X	WW	1								X	X	X					X	
Well # 475 (40 mL vial) 475	7/21/2021	9:15		X	WW	2											X	X				
Well # 475 (40 mL vial) 475	7/21/2021	9:15		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	7/21/21	1434
RECEIVED: MLA	7/21/21	1449
RELINQUISHED: MLA	7/21/21	1705
RECEIVED:	7-21-21	1705
RELINQUISHED:		
RECEIVED:		

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☐ AMBIENT ☐ 2107-12167

MLA

YG 2/4

MICROBAC

Microbac Laboratories, Inc.

CHAIN OF CUSTODY FORM

61 Louisa Viens Drive - Dayville, CT 06241
Tel: (860)774-6814 - Fax: (860)774-2689

R.I.

FOR LAB USE ONLY

Lab WO#

Project Manager

Copy of Report To		Billing Information		Project Information	
CUSTOMER:	WOODARD & CURRAN, INC.	BILL TO:	WOODARD & CURRAN, INC.	PROJECT:	PLYMOUTH, MA WWTP
ADDRESS:	131 CAMELOT DRIVE	ADDRESS:	131 CAMELOT DRIVE	LOCATION:	ID 11773
	PLYMOUTH, MA 02360		PLYMOUTH, MA 02360		WELLS - QUARTERLY
DELIVERY:	ROBERT BLANCHARD	PURCHASE ORDER #		ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL	ROBERT SCOTT
E-MAIL:	robert.blanchard@veolia.com	ATTENTION:	ACCOUNTS PAYABLE	PHONE:	CELL - 860-204-7988
PHONE:	508-830-4159 FAX: 508-732-0238	PHONE:	508-830-4159	FAX:	508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # 6D (250 mL)	7/21/2021	8:43		X	WW	1	X	X											X			
Well # 6D (250 mL)	7/21/2021	8:43		X	WW	1			X	X								X				
Well # 6D (250 mL)(filtered)	7/21/2021	8:43		X	WW	1					X							X				
Well # 6D (250 mL)	7/21/2021	8:43		X	WW	1						X						X				
Well # 6D (250 mL)	7/21/2021	8:43		X	WW	1							X					X				
Well # 6D (250 mL)	7/21/2021	8:43		X	WW	1								X	X	X					X	
Well # 6D (40 mL vial) 6D	7/21/2021	8:43		X	WW	2											X	X				
Well # 6D (40 mL vial) 6D	7/21/2021	8:43		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	7/21/21	1434
RECEIVED:	7/21/21	1449
RELINQUISHED:	7/21/2	1705
RECEIVED:	7-21-21	1705
RELINQUISHED:		
RECEIVED:		

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☐ AMBIENT ☐

2107-12167

PQ 3084

CHAIN OF CUSTODY FORM

~~MICROBAC~~ R.E

Microbac Laboratories, Inc.
61 Louisa Viens Drive - Dayville, CT 06241
Tel: (860)774-6814 - Fax: (860)774-2689

FOR LAB USE ONLY
Lab WO#
Project Manager

Copy of Report To		Billing Information		Project Information	
CUSTOMER:	WOODARD & CURRAN, INC.	BILL TO:	WOODARD & CURRAN, INC.	PROJECT:	PLYMOUTH, MA WWTP
ADDRESS:	131 CAMELOT DRIVE	ADDRESS:	131 CAMELOT DRIVE	LOCATION:	ID 11773
	PLYMOUTH, MA 02360		PLYMOUTH, MA 02360		WELLS - QUARTERLY
DELIVERY:	ROBERT BLANCHARD	PURCHASE ORDER #		ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL	ROBERT SCOTT
E-MAIL:	robert.blanchard@veolia.com	ATTENTION:	ACCOUNTS PAYABLE	PHONE:	CELL - 860-204-7988
PHONE:	508-830-4159 FAX: 508-732-0238	PHONE:	508-830-4159	FAX:	508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # 6S (250 mL)	7/21/2021	8:10		X	WW	1	X	X											X			
Well # 6S (250 mL)	7/21/2021	8:10		X	WW	1			X	X								X				
Well # 6S (250 mL)(filtered)	7/21/2021	8:10		X	WW	1					X							X				
Well # 6S (250 mL)	7/21/2021	8:10		X	WW	1						X						X				
Well # 6S (250 mL)	7/21/2021	8:10		X	WW	1							X					X				
Well # 6S (250 mL)	7/21/2021	8:10		X	WW	1								X	X	X					X	
Well # 6S (40 mL vial) 6S	7/21/2021	8:10		X	WW	2											X	X				
Well # 6S (40 mL vial) 6S	7/21/2021	8:10		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	7/21	1434
RECEIVED:	7/21/21	1449
RELINQUISHED:	7/21/21	1705
RECEIVED:	7-21-21	1705
RELINQUISHED:		
RECEIVED:		

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☐ AMBIENT ☐

2107-12167

pg 4 of 4

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Woodard & Curran, Inc.
Attn: Robert Scott
131 Camelot Drive
Plymouth, MA 02360

Date Received: 7/28/2021
Date Reported: 8/9/2021
P.O. Number

Work Order #: 2107-12633

Project Name: PLYMOUTH, MA WWTP - LOCATION ID 11773 WELLS-QUARTERLY

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2107-12633

Project Name: PLYMOUTH, MA WWTP - LOCATION ID 11773 WELLS-QUARTERLY

Sample Number: 001
Sample Description: WELL# A8
Sample Type : GRAB
Sample Date / Time : 7/28/2021 @ 10:44

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TKN (as N)	<0.50	0.50	mg/l	SM4500NOrg-D 18-21ed	8/3/2021	9:45	RPK
Total Phosphorus (as P)	3.0	0.010	mg/l	SM4500P-B,E-2011	8/2/2021	12:30	TML
Nitrite (as N)	<0.050	0.050	mg/l	EPA 300.0	7/29/2021	13:08	KPG
Nitrate (as N)	4.0	0.050	mg/l	EPA 300.0	7/29/2021	13:08	KPG
Chloride	520	5.0	mg/l	EPA 300.0	7/29/2021	13:08	KPG
Orthophosphate	3.4	0.020	mg/l	SM 4500 P E-2011	7/29/2021	21:13	KPG
Alkalinity (as CaCO3)	110	1.0	mg/l	SM2320B 18-21ed	7/28/2021	17:46	JEP
Total Metals							
Boron	0.18	0.050	mg/l	EPA 200.7	7/30/2021	15:45	CEV
Copper	<0.025	0.025	mg/l	EPA 200.7	7/30/2021	15:45	CEV
Sodium	350	25	mg/l	EPA 200.7	8/2/2021	11:26	CEV
Volatile Organic Compounds							
Chloromethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Bromomethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Vinyl Chloride	<0.40	0.40	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Chloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Methylene Chloride	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Trichlorofluoromethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
1,1-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
1,1-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
trans-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Chloroform	7.3	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
1,2-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
1,1,1-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Carbon Tetrachloride	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Bromodichloromethane	1.3	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
1,2-Dichloropropane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
cis-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Trichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
trans-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	7/29/2021	10:53	SAR
1,1,2-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Dibromochloromethane	1.2	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Bromoform	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Tetrachloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Chlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
2-Chloroethyl vinyl ether	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
1,2-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
1,3-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2107-12633

Project Name: PLYMOUTH, MA WWTP - LOCATION ID 11773 WELLS-QUARTERLY

Sample Number: 001
Sample Description: WELL# A8
Sample Type : GRAB
Sample Date / Time : 7/28/2021 @ 10:44

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
1,4-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Dichlorobenzenes	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Benzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Toluene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Ethylbenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
o-Xylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
m,p-Xylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Acetone	<10	10	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Acrolein	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Acrylonitrile	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Methyl Tertiary Butyl Ether (MTBE)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Carbon Disulfide	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Styrene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Vinyl Acetate	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
4-methyl-2-pentanone(MIBK)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
2-Hexanone	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
2-Butanone(MEK)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
cis-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
1,2-Dibromoethane(EDB)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Dibromomethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Bromochloromethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	10:53	SAR
Surrogates			RANGE	EPA 624.1	7/29/2021	10:53	SAR
Dibromofluoromethane	99		80-120%	EPA 624.1	7/29/2021	10:53	SAR
Toluene-D8	100		80-120%	EPA 624.1	7/29/2021	10:53	SAR
4-Bromofluorobenzene	98		80-120%	EPA 624.1	7/29/2021	10:53	SAR
ICP Digestion				EPA 200.7	7/29/2021	13:14	BB

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

CHAIN OF CUSTODY FORM

Microbac Laboratories, Inc.
61 Louisa Viens Drive - Dayville, CT 06241
Tel: (860)774-6814 - Fax: (860)774-2689

FOR LAB USE ONLY
Lab WO#
Project Manager

Copy of Report To		Billing Information		Project Information	
CUSTOMER:	WOODARD & CURRAN, INC.	BILL TO:	WOODARD & CURRAN, INC.	PROJECT:	PLYMOUTH, MA WWTP
ADDRESS:	131 CAMELOT DRIVE	ADDRESS:	131 CAMELOT DR.	LOCATION:	ID 11773
	PLYMOUTH, MA 02360		PLYMOUTH, Ma		WELLS - QUARTERLY
DELIVERY:	ROBERT SCOTT	PURCHASE ORDER #		ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL	ROBERT SCOTT
E-MAIL:	RSCOTT@WOODARDCURRAN.COM	ATTENTION:	ACCOUNTS PAYABLE	PHONE:	CELL - 860-204-7988
PHONE:	508-830-4159 FAX: 508-732-0238	PHONE:	508-830-4159	FAX:	508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # A8 (250 mL)	7/28/2021	10:44		X	WW	1	X	X											X			
Well # A8 (250 mL)	7/28/2021	10:44		X	WW	1			X	X								X				
Well # A8 (250 mL)(filtered)	7/28/2021	10:44		X	WW	1					X							X				
Well # A8 (250 mL)	7/28/2021	10:44		X	WW	1						X						X				
Well # A8 (250 mL)	7/28/2021	10:44		X	WW	1							X					X				
Well # A8 (250 mL)	7/28/2021	10:44		X	WW	1								X	X	X					X	
Well # A8 (40 mL vial)	7/28/2021	10:44		X	WW	2											X	X				
Well # A8 (40 mL vial)	7/28/2021	10:44		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	7/28/21	
RECEIVED:		
RELINQUISHED:	7/28	14:30
RECEIVED:	7/28/21	1430
RELINQUISHED:	7/28/21	1735
RECEIVED:	7-28-21	1735

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☐ AMBIENT ☐

2107-12633

MM 4.2

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Woodard & Curran, Inc.
Attn: Robert Scott
131 Camelot Drive
Plymouth, MA 02360

Date Received: 7/28/2021
Date Reported: 8/9/2021
P.O. Number

Work Order #: 2107-12635

Project Name: PLYMOUTH, MA WWTP LOCATION - ID 11773 WELLS QUARTERLY

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2107-12635

Project Name: PLYMOUTH, MA WWTP LOCATION - ID 11773 WELLS QUARTERLY

Sample Number: 001
Sample Description: WELL# A9
Sample Type : GRAB
Sample Date / Time : 7/28/2021 @ 09:06

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TKN (as N)	<0.50	0.50	mg/l	SM4500NOrg-D 18-21ed	8/3/2021	9:45	RPK
Total Phosphorus (as P)	0.015	0.010	mg/l	SM4500P-B,E-2011	8/2/2021	12:30	TML
Nitrite (as N)	<0.050	0.050	mg/l	EPA 300.0	7/29/2021	12:56	KPG
Nitrate (as N)	4.4	0.050	mg/l	EPA 300.0	7/29/2021	12:56	KPG
Chloride	490	5.0	mg/l	EPA 300.0	7/29/2021	12:56	KPG
Orthophosphate	0.020	0.020	mg/l	SM 4500 P E-2011	7/29/2021	21:13	KPG
Alkalinity (as CaCO3)	41	1.0	mg/l	SM2320B 18-21ed	7/29/2021	21:44	JEP
Total Metals							
Boron	0.14	0.050	mg/l	EPA 200.7	8/3/2021	11:50	CEV
Copper	<0.025	0.025	mg/l	EPA 200.7	8/3/2021	11:50	CEV
Sodium	340	25	mg/l	EPA 200.7	8/3/2021	16:09	CEV
Volatile Organic Compounds							
Chloromethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Bromomethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Vinyl Chloride	<0.40	0.40	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Chloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Methylene Chloride	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Trichlorofluoromethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
1,1-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
1,1-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
trans-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Chloroform	6.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
1,2-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
1,1,1-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Carbon Tetrachloride	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Bromodichloromethane	3.5	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
1,2-Dichloropropane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
cis-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Trichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
trans-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	7/29/2021	11:16	SAR
1,1,2-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Dibromochloromethane	3.9	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Bromoform	1.4	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Tetrachloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Chlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
2-Chloroethyl vinyl ether	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
1,2-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
1,3-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2107-12635

Project Name: PLYMOUTH, MA WWTP LOCATION - ID 11773 WELLS QUARTERLY

Sample Number: 001
Sample Description: WELL# A9
Sample Type : GRAB
Sample Date / Time : 7/28/2021 @ 09:06

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
1,4-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Dichlorobenzenes	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Benzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Toluene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Ethylbenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
o-Xylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
m,p-Xylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Acetone	<10	10	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Acrolein	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Acrylonitrile	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Methyl Tertiary Butyl Ether (MTBE)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Carbon Disulfide	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Styrene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Vinyl Acetate	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
4-methyl-2-pentanone(MIBK)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
2-Hexanone	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
2-Butanone(MEK)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
cis-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
1,2-Dibromoethane(EDB)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Dibromomethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Bromochloromethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:16	SAR
Surrogates			RANGE	EPA 624.1	7/29/2021	11:16	SAR
Dibromofluoromethane	96		80-120%	EPA 624.1	7/29/2021	11:16	SAR
Toluene-D8	99		80-120%	EPA 624.1	7/29/2021	11:16	SAR
4-Bromofluorobenzene	99		80-120%	EPA 624.1	7/29/2021	11:16	SAR
ICP Digestion				EPA 200.7	7/30/2021	16:25	BB

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

CHAIN OF CUSTODY FORM

Microbac Laboratories, Inc.
61 Louisa Viens Drive - Dayville, CT 06241
Tel: (860)774-6814 - Fax: (860)774-2689

FOR LAB USE ONLY
Lab WO#
Project Manager

Copy of Report To		Billing Information		Project Information	
CUSTOMER:	WOODARD & CURRAN, INC.	BILL TO:	WOODARD & CURRAN, INC.	PROJECT:	PLYMOUTH, MA WWTP
ADDRESS:	131 CAMELOT DRIVE	ADDRESS:	131 CAMELOT DR.	LOCATION:	ID 11773
	PLYMOUTH, MA 02360		PLYMOUTH, Ma		WELLS - QUARTERLY
DELIVERY:	ROBERT SCOTT	PURCHASE ORDER #		ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL	ROBERT SCOTT
E-MAIL:	RSCOTT@WOODARDCURRAN.COM	ATTENTION:	ACCOUNTS PAYABLE	PHONE:	CELL - 860-204-7988
PHONE:	508-830-4159 FAX: 508-732-0238	PHONE:	508-830-4159	FAX:	508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # A9 (250 mL)	7/28/2021	09:06		X	WW	1	X	X											X			
Well # A9 (250 mL)	7/28/2021	09:06		X	WW	1			X	X								X				
Well # A9 (250 mL)(filtered)	7/28/2021	09:06		X	WW	1					X							X				
Well # A9 (250 mL)	7/28/2021	09:06		X	WW	1						X						X				
Well # A9 (250 mL)	7/28/2021	09:06		X	WW	1							X					X				
Well # A9 (250 mL)	7/28/2021	09:06		X	WW	1								X	X	X					X	
Well # A9 (40 mL vial)	7/28/2021	09:06		X	WW	2											X	X				
Well # A9 (40 mL vial)	7/28/2021	09:06		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER: Rejeed Jam	7/28/21	
RECEIVED:		
RELINQUISHED:	7/28	14:30
RECEIVED: MLR	7/28/21	1430
RELINQUISHED: MLR	7/28/21	1735
RECEIVED:	7-28-21	1735

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX	☐	HARD COPY	☐	E-MAIL	☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE):

COOLED	☐	AMBIENT	☐	COMPLIANT	☐

2107-12635

MLR 4.0

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Woodard & Curran, Inc.
Attn: Robert Scott
131 Camelot Drive
Plymouth, MA 02360

Date Received: 7/28/2021
Date Reported: 8/9/2021
P.O. Number

Work Order #: 2107-12636

Project Name: PLYMOUTH, MA WWTP - LOCATION ID 11773 WELLS - QUARTERLY

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2107-12636

Project Name: PLYMOUTH, MA WWTP - LOCATION ID 11773 WELLS - QUARTERLY

Sample Number: 001
Sample Description: WELL# A10
Sample Type : GRAB
Sample Date / Time : 7/28/2021 @ 09:35

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TKN (as N)	<0.50	0.50	mg/l	SM4500NOrg-D 18-21ed	8/3/2021	9:45	RPK
Total Phosphorus (as P)	<0.010	0.010	mg/l	SM4500P-B,E-2011	8/2/2021	12:30	TML
Nitrite (as N)	<0.050	0.050	mg/l	EPA 300.0	7/29/2021	13:20	KPG
Nitrate (as N)	3.6	0.050	mg/l	EPA 300.0	7/29/2021	13:20	KPG
Chloride	420	5.0	mg/l	EPA 300.0	7/29/2021	13:20	KPG
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	7/29/2021	21:13	KPG
Alkalinity (as CaCO3)	41	1.0	mg/l	SM2320B 18-21ed	7/29/2021	21:44	JEP
Total Metals							
Boron	0.12	0.050	mg/l	EPA 200.7	8/3/2021	11:51	CEV
Copper	<0.025	0.025	mg/l	EPA 200.7	8/3/2021	11:51	CEV
Sodium	300	25	mg/l	EPA 200.7	8/3/2021	16:11	CEV
Volatile Organic Compounds							
Chloromethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Bromomethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Vinyl Chloride	<0.40	0.40	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Chloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Methylene Chloride	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Trichlorofluoromethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
1,1-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
1,1-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
trans-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Chloroform	2.9	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
1,2-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
1,1,1-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Carbon Tetrachloride	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Bromodichloromethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
1,2-Dichloropropane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
cis-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Trichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
trans-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	7/29/2021	11:39	SAR
1,1,2-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Dibromochloromethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Bromoform	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Tetrachloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Chlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
2-Chloroethyl vinyl ether	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
1,2-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
1,3-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2107-12636

Project Name: PLYMOUTH, MA WWTP - LOCATION ID 11773 WELLS - QUARTERLY

Sample Number: 001
Sample Description: WELL# A10
Sample Type : GRAB
Sample Date / Time : 7/28/2021 @ 09:35

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
1,4-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Dichlorobenzenes	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Benzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Toluene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Ethylbenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
o-Xylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
m,p-Xylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Acetone	<10	10	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Acrolein	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Acrylonitrile	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Methyl Tertiary Butyl Ether (MTBE)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Carbon Disulfide	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Styrene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Vinyl Acetate	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
4-methyl-2-pentanone(MIBK)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
2-Hexanone	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
2-Butanone(MEK)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
cis-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
1,2-Dibromoethane(EDB)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Dibromomethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Bromochloromethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	11:39	SAR
Surrogates			RANGE	EPA 624.1	7/29/2021	11:39	SAR
Dibromofluoromethane	98		80-120%	EPA 624.1	7/29/2021	11:39	SAR
Toluene-D8	99		80-120%	EPA 624.1	7/29/2021	11:39	SAR
4-Bromofluorobenzene	98		80-120%	EPA 624.1	7/29/2021	11:39	SAR
ICP Digestion				EPA 200.7	7/30/2021	16:25	BB

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

CHAIN OF CUSTODY FORM

Microbac Laboratories, Inc.
61 Louisa Viens Drive - Dayville, CT 06241
Tel: (860)774-6814 - Fax: (860)774-2689

FOR LAB USE ONLY

Lab WO#

Project Manager

Copy of Report To		Billing Information		Project Information	
CUSTOMER:	WOODARD & CURRAN, INC.	BILL TO:	WOODARD & CURRAN, INC.	PROJECT:	PLYMOUTH, MA WWTP
ADDRESS:	131 CAMELOT DRIVE	ADDRESS:	131 CAMELOT DR.	LOCATION:	ID 11773
	PLYMOUTH, MA 02360		PLYMOUTH, Ma		WELLS - QUARTERLY
DELIVERY:	ROBERT SCOTT	PURCHASE ORDER #		ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL	ROBERT SCOTT
E-MAIL:	RSCOTT@WOODARDCURRAN.COM	ATTENTION:	ACCOUNTS PAYABLE	PHONE:	CELL - 860-204-7988
PHONE:	508-830-4159 FAX: 508-732-0238	PHONE:	508-830-4159	FAX:	508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # A10 (250 mL)	7/28/2021	09:35		X	WW	1	X	X											X			
Well # A10 (250 mL)	7/28/2021	09:35		X	WW	1			X	X								X				
Well # A10 (250 mL)(filtered)	7/28/2021	09:35		X	WW	1					X							X				
Well # A10 (250 mL)	7/28/2021	09:35		X	WW	1						X						X				
Well # A10 (250 mL)	7/28/2021	09:35		X	WW	1							X					X				
Well # A10 (250 mL)	7/28/2021	09:35		X	WW	1								X	X	X					X	
Well # A10 (40 mL vial)	7/28/2021	09:35		X	WW	2											X	X				
Well # A10 (40 mL vial)	7/28/2021	09:35		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER: Rupert Gunn	7/28/21	
RECEIVED:		
RELINQUISHED:	7/28	14:38
RECEIVED: MLH	7/28/21	1430
RELINQUISHED: MLH	7/28/21	1735
RECEIVED:	7-28-21	1735

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☐ AMBIENT ☐

2107-12636

MLH 4.2

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Woodard & Curran, Inc.
Attn: Robert Scott
131 Camelot Drive
Plymouth, MA 02360

Date Received: 7/28/2021
Date Reported: 8/9/2021
P.O. Number

Work Order #: 2107-12637

Project Name: PLYMOUTH, MA WWTP - LOCATION ID 11773 WELLS - QUARTERLY

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2107-12637

Project Name: PLYMOUTH, MA WWTP - LOCATION ID 11773 WELLS - QUARTERLY

Sample Number: 001
Sample Description: WELL# A16
Sample Type : GRAB
Sample Date / Time : 7/28/2021 @ 10:08

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TKN (as N)	<0.50	0.50	mg/l	SM4500NOrg-D 18-21ed	8/3/2021	9:45	RPK
Total Phosphorus (as P)	<0.010	0.010	mg/l	SM4500P-B,E-2011	8/2/2021	12:30	TML
Nitrite (as N)	0.058	0.050	mg/l	EPA 300.0	7/29/2021	13:43	KPG
Nitrate (as N)	5.6	0.050	mg/l	EPA 300.0	7/29/2021	13:43	KPG
Chloride	100	1.0	mg/l	EPA 300.0	7/29/2021	13:43	KPG
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	7/29/2021	21:13	KPG
Alkalinity (as CaCO3)	4.1	1.0	mg/l	SM2320B 18-21ed	7/29/2021	21:44	JEP
Total Metals							
Boron	0.054	0.050	mg/l	EPA 200.7	8/3/2021	11:53	CEV
Copper	<0.025	0.025	mg/l	EPA 200.7	8/3/2021	11:53	CEV
Sodium	280	25	mg/l	EPA 200.7	8/3/2021	16:12	CEV
Volatile Organic Compounds							
Chloromethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Bromomethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Vinyl Chloride	<0.40	0.40	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Chloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Methylene Chloride	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Trichlorofluoromethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
1,1-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
1,1-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
trans-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Chloroform	2.2	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
1,2-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
1,1,1-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Carbon Tetrachloride	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Bromodichloromethane	3.1	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
1,2-Dichloropropane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
cis-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Trichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
trans-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	7/29/2021	12:02	SAR
1,1,2-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Dibromochloromethane	5.6	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Bromoform	4.5	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Tetrachloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Chlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
2-Chloroethyl vinyl ether	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
1,2-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
1,3-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2107-12637

Project Name: PLYMOUTH, MA WWTP - LOCATION ID 11773 WELLS - QUARTERLY

Sample Number: 001
Sample Description: WELL# A16
Sample Type : GRAB
Sample Date / Time : 7/28/2021 @ 10:08

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
1,4-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Dichlorobenzenes	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Benzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Toluene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Ethylbenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
o-Xylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
m,p-Xylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Acetone	<10	10	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Acrolein	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Acrylonitrile	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Methyl Tertiary Butyl Ether (MTBE)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Carbon Disulfide	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Styrene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Vinyl Acetate	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
4-methyl-2-pentanone(MIBK)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
2-Hexanone	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
2-Butanone(MEK)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
cis-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
1,2-Dibromoethane(EDB)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Dibromomethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Bromochloromethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:02	SAR
Surrogates			RANGE	EPA 624.1	7/29/2021	12:02	SAR
Dibromofluoromethane	97		80-120%	EPA 624.1	7/29/2021	12:02	SAR
Toluene-D8	98		80-120%	EPA 624.1	7/29/2021	12:02	SAR
4-Bromofluorobenzene	99		80-120%	EPA 624.1	7/29/2021	12:02	SAR
ICP Digestion				EPA 200.7	7/30/2021	16:25	BB

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

CHAIN OF CUSTODY FORM

Microbac Laboratories, Inc.
61 Louisa Viens Drive - Dayville, CT 06241
Tel: (860)774-6814 - Fax: (860)774-2689

FOR LAB USE ONLY
Lab WO#
Project Manager

Copy of Report To

CUSTOMER: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DRIVE
PLYMOUTH, MA 02360
DELIVERY: ROBERT SCOTT
E-MAIL: RSCOTT@WOODARDCURRAN.COM
PHONE: 508-830-4159 FAX: 508-732-0238

Billing Information

BILL TO: WOODARD & CURRAN, INC.
ADDRESS: 131 CAMELOT DR.
PLYMOUTH, Ma
PURCHASE ORDER #
ATTENTION: ACCOUNTS PAYABLE
PHONE: 508-830-4159

Project Information

PROJECT: PLYMOUTH, MA WWTP
LOCATION: ID 11773
WELLS - QUARTERLY
ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL
ROBERT SCOTT
PHONE: CELL - 860-204-7988
FAX: 508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # A16 (250 mL)	7/28/2021	10:08		X	WW	1	X	X											X			
Well # A16 (250 mL)	7/28/2021	10:08		X	WW	1			X	X								X				
Well # A16 (250 mL)(filtered)	7/28/2021	10:08		X	WW	1					X							X				
Well # A16 (250 mL)	7/28/2021	10:08		X	WW	1						X						X				
Well # A16 (250 mL)	7/28/2021	10:08		X	WW	1							X					X				
Well # A16 (250 mL)	7/28/2021	10:08		X	WW	1								X	X	X					X	
Well # A16 (40 mL vial)	7/28/2021	10:08		X	WW	2											X	X				
Well # A16 (40 mL vial)	7/28/2021	10:08		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER: Robert Scott	7/28/21	
RECEIVED:		
RELINQUISHED:	7/29/21	14:30
RECEIVED: MLL	7/29/21	1430
RELINQUISHED: MLL	7/28/21	1735
RECEIVED: Angela	7.28.21	1735

TURN AROUND (INDICATE IN CALENDAR DAYS):
FAX ☐ HARD COPY ☐ E-MAIL ☐
EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE
COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐
COOLED ☐ AMBIENT ☐

MLL 4.2

2107-12637

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Woodard & Curran, Inc.
Attn: Robert Scott
131 Camelot Drive
Plymouth, MA 02360

Date Received: 7/28/2021
Date Reported: 8/5/2021
P.O. Number

Work Order #: 2107-12638

Project Name: PLYMOUTH, MA WWTP - LOCATION ID 11773 WELLS - QUARTERLY

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2107-12638

Project Name: PLYMOUTH, MA WWTP - LOCATION ID 11773 WELLS - QUARTERLY

Sample Number: 001
Sample Description: WELL# 1S
Sample Type : GRAB
Sample Date / Time : 7/28/2021 @ 08:28

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TKN (as N)	<0.50	0.50	mg/l	SM4500NOrg-D 18-21ed	8/2/2021	15:20	RPK
Total Phosphorus (as P)	<0.010	0.010	mg/l	SM4500P-B,E-2011	8/2/2021	12:30	TML
Nitrite (as N)	0.054	0.050	mg/l	EPA 300.0	7/29/2021	13:32	KPG
Nitrate (as N)	0.19	0.050	mg/l	EPA 300.0	7/29/2021	13:32	KPG
Chloride	13	1.0	mg/l	EPA 300.0	7/29/2021	13:32	KPG
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	7/29/2021	21:13	KPG
Alkalinity (as CaCO3)	3.1	1.0	mg/l	SM2320B 18-21ed	7/29/2021	21:44	JEP
Total Metals							
Boron	<0.050	0.050	mg/l	EPA 200.7	8/3/2021	11:48	CEV
Copper	<0.025	0.025	mg/l	EPA 200.7	8/3/2021	11:48	CEV
Sodium	9.2	2.5	mg/l	EPA 200.7	8/3/2021	11:48	CEV
Volatile Organic Compounds							
Chloromethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Bromomethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Vinyl Chloride	<0.40	0.40	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Chloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Methylene Chloride	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Trichlorofluoromethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
1,1-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
1,1-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
trans-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Chloroform	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
1,2-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
1,1,1-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Carbon Tetrachloride	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Bromodichloromethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
1,2-Dichloropropane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
cis-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Trichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
trans-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	7/29/2021	12:25	SAR
1,1,2-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Dibromochloromethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Bromoform	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Tetrachloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Chlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
2-Chloroethyl vinyl ether	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
1,2-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
1,3-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2107-12638

Project Name: PLYMOUTH, MA WWTP - LOCATION ID 11773 WELLS - QUARTERLY

Sample Number: 001
Sample Description: WELL# 1S
Sample Type : GRAB
Sample Date / Time : 7/28/2021 @ 08:28

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
1,4-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Dichlorobenzenes	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Benzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Toluene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Ethylbenzene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
o-Xylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
m,p-Xylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Acetone	<10	10	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Acrolein	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Acrylonitrile	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Methyl Tertiary Butyl Ether (MTBE)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Carbon Disulfide	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Styrene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Vinyl Acetate	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
4-methyl-2-pentanone(MIBK)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
2-Hexanone	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
2-Butanone(MEK)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
cis-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
1,2-Dibromoethane(EDB)	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Dibromomethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Bromochloromethane	<1.0	1.0	ug/l	EPA 624.1	7/29/2021	12:25	SAR
Surrogates			RANGE	EPA 624.1	7/29/2021	12:25	SAR
Dibromofluoromethane	98		80-120%	EPA 624.1	7/29/2021	12:25	SAR
Toluene-D8	99		80-120%	EPA 624.1	7/29/2021	12:25	SAR
4-Bromofluorobenzene	97		80-120%	EPA 624.1	7/29/2021	12:25	SAR
ICP Digestion				EPA 200.7	7/30/2021	16:25	BB

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

CHAIN OF CUSTODY FORM

Microbac Laboratories, Inc.

61 Louisa Viens Drive - Dayville, CT 06241
Tel: (860)774-6814 - Fax: (860)774-2689

FOR LAB USE ONLY
Lab WO#
Project Manager

Copy of Report To		Billing Information		Project Information	
CUSTOMER:	WOODARD & CURRAN, INC.	BILL TO:	WOODARD & CURRAN, INC.	PROJECT:	PLYMOUTH, MA WWTP
ADDRESS:	131 CAMELOT DRIVE	ADDRESS:	131 CAMELOT DR.	LOCATION:	ID 11773
	PLYMOUTH, MA 02360		PLYMOUTH, Ma		WELLS - QUARTERLY
DELIVERY:	ROBERT SCOTT	PURCHASE ORDER #		ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL	ROBERT SCOTT
E-MAIL:	RSCOTT@WOODARDCURRAN.COM	ATTENTION:	ACCOUNTS PAYABLE	PHONE:	CELL - 860-204-7988
PHONE:	508-830-4159 FAX: 508-732-0238	PHONE:	508-830-4159	FAX:	508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	HCL	HNO3	OTHER
Well # 1S (250 mL)	7/28/2021	08:28		X	WW	1	X	X											X			
Well # 1S (250 mL)	7/28/2021	08:28		X	WW	1			X	X								X				
Well # 1S (250 mL)(filtered)	7/28/2021	08:28		X	WW	1					X							X				
Well # 1S (250 mL)	7/28/2021	08:28		X	WW	1						X						X				
Well # 1S (250 mL)	7/28/2021	08:28		X	WW	1							X					X				
Well # 1S (250 mL)	7/28/2021	08:28		X	WW	1								X	X	X					X	
Well # 1S (40 mL vial)	7/28/2021	08:28		X	WW	2											X	X				
Well # 1S (40 mL vial)	7/28/2021	08:28		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER: Robert Scott	7/28/21	
RECEIVED:		
RELINQUISHED:	7/28	14:30
RECEIVED: MER	7/28/21	1430
RELINQUISHED: MER	7/28/21	1735
RECEIVED:	7/28/21	1735

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☐ AMBIENT ☐

MER 4.2

2107-12638

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Woodard & Curran, Inc.
Attn: Eileen McNeil
131 Camelot Drive
Plymouth, MA 02360

Date Received: 8/11/2021
Date Reported: 8/13/2021
P.O. Number

Work Order #: 2108-13645

Project Name: TOWN OF PLYMOUTH

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2108-13645

Project Name: TOWN OF PLYMOUTH

Sample Number: 001
Sample Description: WELL 6S
Sample Type : GRAB
Sample Date / Time : 8/11/2021 @ 08:27

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Phosphorus (as P)	0.025	0.010	mg/l	SM4500P-B,E-2011	8/12/2021	11:50	RPK
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	8/12/2021	20:00	KPG

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 002
Sample Description: WELL 6D
Sample Type : GRAB
Sample Date / Time : 8/11/2021 @ 08:43

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Phosphorus (as P)	0.019	0.010	mg/l	SM4500P-B,E-2011	8/12/2021	11:50	RPK
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	8/12/2021	20:00	KPG

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 003
Sample Description: WELL 475
Sample Type : GRAB
Sample Date / Time : 8/11/2021 @ 09:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Phosphorus (as P)	0.029	0.010	mg/l	SM4500P-B,E-2011	8/12/2021	11:50	RPK
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	8/12/2021	20:00	KPG

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2108-13645

Project Name: TOWN OF PLYMOUTH

Sample Number: 004
Sample Description: WELL 1S
Sample Type : GRAB
Sample Date / Time : 8/11/2021 @ 09:48

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Phosphorus (as P)	0.015	0.010	mg/l	SM4500P-B,E-2011	8/12/2021	11:50	RPK
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	8/12/2021	20:00	KPG

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 005
Sample Description: WELL A9
Sample Type : GRAB
Sample Date / Time : 8/11/2021 @ 10:24

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Phosphorus (as P)	0.029	0.010	mg/l	SM4500P-B,E-2011	8/12/2021	11:50	RPK
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	8/12/2021	20:00	KPG

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Specialists in Environmental Services

CHAIN OF CUSTODY RECORD

41 Illinois Avenue
Warwick, RI 02888-3007
Tel: 800-937-2580

131 Coolidge St., Suite 105
Hudson, MA 01749-1331
Tel: 800-937-2580

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type C	Preservation Code P	Matrix Code M	TOTAL P	ORTHO P
8/11/21	0827	WELL 6S 250mL np	G	1	Np	WW		X
8/11/21	0827	WELL 6S 250mL h2s04	G	1	S	WW	X	
8/11/21	0843	WELL 6D 250mL np	G	1	Np	WWW		X
8/11/21	0843	WELL 6D 250mL h2s04	G	1	S	WW	X	
8/11/21	0910	WELL 475 250mL np	G	1	Np	WW		
8/11/21	0910	WELL 475 250mL h2s04	G	1	S	WW	X	
8/11/21	0948	WELL 1S 250 mL np	G	1	Np	WW		X
8/11/21	0948	WELL 1S 250 mL h2s04	G	1	S	WW	X	
8/11/21	1024	WELL A9 250 mL np	G	1	NP	WW		X
8/11/21	1024	WELL A9 250 mL h2s04	G	1	S	WW	X	

Client Information

Company Name: Woodard & Curran
Address: 131 Camelot Drive
City / State / Zip: Plymouth MA 02360
Main Telephone: 508-830-4159 x207
Contact Person: Eileen L. McNeil

Project Information

Project Name: Town of Plymouth WWTP
P.O. Number: Project Number:
Report To: E. McNeil Cell: 774-608-1213 Phone: 508-830-4159
Sampled by: Email addresses
Quote No:

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
FREEMAN	8/11/2021	1522	MEH (10)	8/11/21	1522
MEH	8/11/21	1735			1735

Turn Around Time

X Normal X EMAIL Report
X 5-7 Business days
Rush – Date Due: ___/___

Reporting Options

MCP Standard _____
MWRA eSMART
State Report & Upload

Project Comments

Email results to

MEH 3.8

Lab Use Only

Sample Pick Up Only
RIAL sampled; attach field hours
Received on Ice No Ice
Workorder No: 2106-B645

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Woodard & Curran, Inc.
Attn: Robert Scott
131 Camelot Drive
Plymouth, MA 02360

Date Received: 8/11/2021
Date Reported: 8/13/2021
P.O. Number

Work Order #: 2108-13642

Project Name: TOWN OF PLYMOUTH WWTP

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2108-13642

Project Name: TOWN OF PLYMOUTH WWTP

Sample Number: 001
Sample Description: WELL A10
Sample Type : GRAB
Sample Date / Time : 8/11/2021 @ 10:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Phosphorus (as P)	0.047	0.010	mg/l	SM4500P-B,E-2011	8/12/2021	11:50	RPK
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	8/12/2021	20:00	KPG

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 002
Sample Description: WELL A16
Sample Type : GRAB
Sample Date / Time : 8/11/2021 @ 11:18

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Phosphorus (as P)	0.018	0.010	mg/l	SM4500P-B,E-2011	8/12/2021	11:50	RPK
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	8/12/2021	20:00	KPG

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 003
Sample Description: WELL A8
Sample Type : GRAB
Sample Date / Time : 8/11/2021 @ 11:44

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Phosphorus (as P)	3.5	0.010	mg/l	SM4500P-B,E-2011	8/12/2021	11:50	RPK
Orthophosphate	3.6	0.020	mg/l	SM 4500 P E-2011	8/12/2021	20:00	KPG

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Orthophosphate - Result is greater than Total Phosphorus (as P), however results are within Duplicate criteria of each other.

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2108-13642

Project Name: TOWN OF PLYMOUTH WWTP

Sample Number: 004
Sample Description: WELL A11
Sample Type : GRAB
Sample Date / Time : 8/11/2021 @ 12:03

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Phosphorus (as P)	0.013	0.010	mg/l	SM4500P-B,E-2011	8/12/2021	11:50	RPK
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	8/12/2021	20:00	KPG

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Specialists in Environmental Services

CHAIN OF CUSTODY RECORD

41 Illinois Avenue
Warwick, RI 02888-3007
Tel: 800-937-2580

131 Coolidge St., Suite 105
Hudson, MA 01749-1331
Tel: 800-937-2580

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type C	Preservation Code P	Matrix Code M	TOTAL P	ORTHO P
8/11/21	1040	WELL A10 250mL np	G	1	Np	WW		X
8/11/21	1040	WELL A10 250mL h2s04	G	1	S	WW	X	
8/11/21	1118	WELL A16 250mL np	G	1	Np	WWW		X
8/11/21	1118	WELL A16 250mL h2s04	G	1	S	WW	X	
8/11/21	1144	WELL A8 250mL np	G	1	Np	WW		
8/11/21	1144	WELL A8 250mL h2s04	G	1	S	WW	X	
8/11/21	1203	WELL A11 250 mL np	G	1	Np	WW		X
8/11/21	1203	WELL A11 250 mL h2s04	G	1	S	WW	X	

Client Information		Project Information			
Company Name:	Woodard & Curran	Project Name:	Town of Plymouth WWTP		
Address:	131 Camelot Drive	P.O. Number:	Project Number:		
City / State / Zip:	Plymouth MA 02360	Report To:	E. McNeil	Cell: 774-608-1213	Phone: 508-830-4159
Main Telephone:	508-830-4159 x207	Sampled by:		Email addresses	
Contact Person:	Eileen L. McNeil	Quote No:			

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
FREEMAN	8/11/2021	1522		8/11/21	1522
MEK	8/11/21	1735		8/11/21	1735

Turn Around Time			
X	Normal	X	EMAIL Report
X	5-7 Business days		
	Rush – Date Due: ___/___/___		

Reporting Options	Project Comments
MCP Standard _____	Email results to ; ; , , , , MEK 38
MWRA eSMART	
State Report & Upload	

Lab Use Only		
X	Sample Pick Up Only	
	RIAL sampled; attach field hours	
X	Received on Ice	No Ice
Workorder No:	21 05-13647	

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, DI=DI-H_2O, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, WP=Wipe, O=_____

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Woodard & Curran, Inc.
Attn: Robert Scott
131 Camelot Drive
Plymouth, MA 02360

Date Received: 9/15/2021
Date Reported: 9/24/2021
P.O. Number

Work Order #: 2109-15814

Project Name: PLYMOUTH, MA WWTP ID 11773 - WELLS - MONTHLY TP & ORTHO-P

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2109-15814

Project Name: PLYMOUTH, MA WWTP ID 11773 - WELLS - MONTHLY TP & ORTHO-P

Sample Number: 001
Sample Description: WELL #A8
Sample Type : GRAB
Sample Date / Time : 9/15/2021 @ 11:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Orthophosphate	4.0	0.020	mg/l	SM 4500 P E-2011	9/16/2021	20:20	KPG
Total Phosphorus (as P)	3.6	0.010	mg/l	SM4500P-B,E-2011	9/22/2021	14:36	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 002
Sample Description: WELL #A9
Sample Type : GRAB
Sample Date / Time : 9/15/2021 @ 10:14

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	9/16/2021	20:20	KPG
Total Phosphorus (as P)	0.059	0.010	mg/l	SM4500P-B,E-2011	9/21/2021	8:00	EMM

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 003
Sample Description: WELL #A10
Sample Type : GRAB
Sample Date / Time : 9/15/2021 @ 10:42

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	9/16/2021	20:20	KPG
Total Phosphorus (as P)	0.020	0.010	mg/l	SM4500P-B,E-2011	9/21/2021	8:00	EMM

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2109-15814

Project Name: PLYMOUTH, MA WWTP ID 11773 - WELLS - MONTHLY TP & ORTHO-P

Sample Number: 004
Sample Description: WELL #A11
Sample Type : GRAB
Sample Date / Time : 9/15/2021 @ 11:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	9/16/2021	20:20	KPG
Total Phosphorus (as P)	0.028	0.010	mg/l	SM4500P-B,E-2011	9/22/2021	14:36	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 005
Sample Description: WELL #A16
Sample Type : GRAB
Sample Date / Time : 9/15/2021 @ 10:57

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	9/16/2021	20:20	KPG
Total Phosphorus (as P)	0.026	0.010	mg/l	SM4500P-B,E-2011	9/21/2021	8:00	EMM

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 006
Sample Description: WELL #1S
Sample Type : GRAB
Sample Date / Time : 9/15/2021 @ 09:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	9/16/2021	20:20	KPG
Total Phosphorus (as P)	0.022	0.010	mg/l	SM4500P-B,E-2011	9/21/2021	8:00	EMM

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2109-15814

Project Name: PLYMOUTH, MA WWTP ID 11773 - WELLS - MONTHLY TP & ORTHO-P

Sample Number: 007
Sample Description: WELL #475
Sample Type : GRAB
Sample Date / Time : 9/15/2021 @ 09:05

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	9/16/2021	20:20	KPG
Total Phosphorus (as P)	0.033	0.010	mg/l	SM4500P-B,E-2011	9/21/2021	8:00	EMM

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 008
Sample Description: WELL #6D
Sample Type : GRAB
Sample Date / Time : 9/15/2021 @ 08:38

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	9/16/2021	20:20	KPG
Total Phosphorus (as P)	0.059	0.010	mg/l	SM4500P-B,E-2011	9/21/2021	8:00	EMM

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 009
Sample Description: WELL #6S
Sample Type : GRAB
Sample Date / Time : 9/15/2021 @ 08:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	9/16/2021	20:20	KPG
Total Phosphorus (as P)	0.022	0.010	mg/l	SM4500P-B,E-2011	9/21/2021	8:00	EMM

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

CHAIN OF CUSTODY FORM

MICROBAC

Microbac Laboratories, Inc.

61 Louisa Viens Drive - Dayville, CT 06241
Tel: (860)774-6814 - Fax: (860)774-2689

FOR LAB USE ONLY
Lab WO#
Project Manager

Copy of Report To		Billing Information		Project Information	
CUSTOMER:	WOODARD & CURRAN, INC.	BILL TO:	WOODARD & CURRAN, INC.	PROJECT:	PLYMOUTH, MA WWTP
ADDRESS:	131 CAMELOT DRIVE	ADDRESS:	131 CAMELOT DRIVE	LOCATION:	ID 11773
	PLYMOUTH, MA 02360		PLYMOUTH, MA		Wells - Monthly TP & Ortho-P
DELIVERY:	ROBERT SCOTT	PURCHASE ORDER #		ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL:	ROBERT SCOTT
E-MAIL:	RSCOTT@WOODARDCURRAN.COM	ATTENTION:	ACCOUNTS PAYABLE	PHONE:	CELL - 860-204-7988
PHONE:	508-830-4159 FAX: 508-732-0238	PHONE:	508-830-4159	FAX:	508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TOTAL PHOS.	Analysis: ORTHO-PHOS	Preservatives: NON-PRES	Preservatives: HS2O4	Preservatives: HCL	Preservatives: HNO3	Preservatives: OTHER
Well # A8 (250 mL)	9/15/2021	11:15		X	WW	1	X			X			
Well # A8 (250 mL) (	9/15/2021	11:15		X	WW	1		X	X				
Well # A9 (250 mL)	9/15/2021	10:14		X	WW	1	X			X			
Well # A9 (250 mL)	9/15/2021	10:14		X	WW	1		X	X				
Well # A10 (250 mL)	9/15/2021	10:42		X	WW	1	X			X			
Well # A10 (250 mL)	9/15/2021	10:42		X	WW	1		X	X				
Well # A11 (250 mL)	9/15/2021	11:45		X	WW	1	X			X			
Well # A11 (250 mL)	9/15/2021	11:45		X	WW	1		X	X				
Well # A16 (250 mL)	9/15/2021	10:57		X	WW	1	X			X			
Well # A16 (250 mL)	9/15/2021	10:57		X	WW	1		X	X				

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	9/15/21	10:14
RECEIVED:		
RELINQUISHED:	9/15/21	15:10
RECEIVED: Mel	9/15/21	1510
RELINQUISHED: Mel	9/15/21	1724
RECEIVED:	9-15-21	1724

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☒ AMBIENT ☐

Mel

2109-15814 1 of 2

CHAIN OF CUSTODY FORM

MICROBAC

Microbac Laboratories, Inc.

61 Louisa Viens Drive - Dayville, CT 06241
Tel: (860)774-6814 - Fax: (860)774-2689

FOR LAB USE ONLY
Lab WO#
Project Manager

Copy of Report To		Billing Information		Project Information	
CUSTOMER:	WOODARD & CURRAN, INC.	BILL TO:	WOODARD & CURRAN, INC.	PROJECT:	PLYMOUTH, MA WWTP
ADDRESS:	131 CAMELOT DRIVE	ADDRESS:	131 CAMELOT DRIVE	LOCATION:	ID 11773
	PLYMOUTH, MA 02360		PLYMOUTH, MA		Wells - Monthly TP & Ortho-P
DELIVERY:	ROBERT SCOTT	PURCHASE ORDER #		ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL	ROBERT SCOTT
E-MAIL:	RSCOTT@WOODARDCURRAN.COM	ATTENTION:	ACCOUNTS PAYABLE	PHONE:	CELL - 860-204-7988
PHONE:	508-830-4159 FAX: 508-732-0238	PHONE:	508-830-4159	FAX:	508-732-0238

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TOTAL PHOS.	Analysis: ORTHO-PHOS	Preservatives: NON-PRES	Preservatives: HS2O4	Preservatives: HCL	Preservatives: HNO3	Preservatives: OTHER
Well # 1S (250 mL)	9/15/2021	9:50		X	WW	1	X			X			
Well # 1S (250 mL)	9/15/2021	9:50		X	WW	1		X	X				
Well # 475 (250 mL)	9/15/2021	9:05		X	WW	1	X			X			
Well # 475 (250 mL)	9/15/2021	9:05		X	WW	1		X	X				
Well # 6D (250 mL)	9/15/2021	8:38		X	WW	1	X			X			
Well # 6D (250 mL)	9/15/2021	8:38		X	WW	1		X	X				
Well # 6S (250 mL)	9/15/2021	8:10		X	WW	1	X			X			
Well # 6S (250 mL)	9/15/2021	8:10		X	WW	1		X	X				

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	9/15/21	0810
RECEIVED:		
RELINQUISHED:	9/15/21	1510
RECEIVED:	9/15/21	1510
RELINQUISHED:	9/15/21	1724
RECEIVED:	9-15-21	1724

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☒ AMBIENT ☐

7109-15814

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Woodard & Curran, Inc.
Attn: Eileen McNeil
131 Camelot Drive
Plymouth, MA 02360

Date Received: 10/13/2021
Date Reported: 10/21/2021
P.O. Number

Work Order #: 2110-17618

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2110-17618

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 001
Sample Description: 6D WELL#
Sample Type : GRAB
Sample Date / Time : 10/13/2021 @ 09:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	10/14/2021	20:40	KPG
Total Phosphorus (as P)	0.010	0.010	mg/l	SM4500P-B,E-2011	10/19/2021	17:25	TML
Alkalinity (as CaCO3)	6.0	1.0	mg/l	SM2320B 18-21ed	10/14/2021	15:40	JEP
Nitrite (as N)	<0.050	0.050	mg/l	EPA 300.0	10/14/2021	14:34	KPG
Nitrate (as N)	2.2	0.050	mg/l	EPA 300.0	10/14/2021	14:34	KPG
Chloride	110	1.0	mg/l	EPA 300.0	10/14/2021	14:34	KPG
TKN (as N)	<0.50	0.50	mg/l	SM4500NOrg-D 18-21ed	10/19/2021	13:00	JMD
Total Metals							
Boron	<0.050	0.050	mg/l	EPA 200.7	10/18/2021	10:24	SAR
Copper	<0.025	0.025	mg/l	EPA 200.7	10/18/2021	10:24	SAR
Sodium	40	2.5	mg/l	EPA 200.7	10/18/2021	10:24	SAR
Volatile Organic Compounds							
Chloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Bromomethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Vinyl Chloride	<0.40	0.40	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Chloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Methylene Chloride	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Trichlorofluoromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
1,1-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
1,1-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
trans-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Chloroform	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
1,2-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
1,1,1-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Carbon Tetrachloride	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Bromodichloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
1,2-Dichloropropane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
cis-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Trichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
trans-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	10/15/2021	16:48	AEH
1,1,2-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Dibromochloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Bromoform	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Tetrachloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Chlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
2-Chloroethyl vinyl ether	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
1,2-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
1,3-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2110-17618

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 001
Sample Description: 6D WELL#
Sample Type : GRAB
Sample Date / Time : 10/13/2021 @ 09:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
1,4-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Dichlorobenzenes	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Benzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Toluene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Ethylbenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
o-Xylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
m,p-Xylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Acetone	<10	10	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Acrolein	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Acrylonitrile	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Methyl Tertiary Butyl Ether (MTBE)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Carbon Disulfide	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Styrene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Vinyl Acetate	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
4-methyl-2-pentanone(MIBK)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
2-Hexanone	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
2-Butanone(MEK)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
cis-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
1,2-Dibromoethane(EDB)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Dibromomethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Bromochloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	16:48	AEH
Surrogates			RANGE	EPA 624.1	10/15/2021	16:48	AEH
Dibromofluoromethane	101		60-140%	EPA 624.1	10/15/2021	16:48	AEH
Toluene-D8	95		60-140%	EPA 624.1	10/15/2021	16:48	AEH
4-Bromofluorobenzene	85		60-140%	EPA 624.1	10/15/2021	16:48	AEH
ICP Digestion				EPA 200.7	10/15/2021	10:39	BB

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2110-17618

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 002
Sample Description: 6S WELL#
Sample Type : GRAB
Sample Date / Time : 10/13/2021 @ 08:33

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	10/14/2021	20:40	KPG
Total Phosphorus (as P)	0.014	0.010	mg/l	SM4500P-B,E-2011	10/19/2021	17:25	TML
Alkalinity (as CaCO3)	5.0	1.0	mg/l	SM2320B 18-21ed	10/14/2021	15:40	JEP
Nitrite (as N)	<0.050	0.050	mg/l	EPA 300.0	10/14/2021	14:46	KPG
Nitrate (as N)	1.1	0.050	mg/l	EPA 300.0	10/14/2021	14:46	KPG
Chloride	27	1.0	mg/l	EPA 300.0	10/14/2021	14:46	KPG
TKN (as N)	<0.50	0.50	mg/l	SM4500NOrg-D 18-21ed	10/19/2021	13:00	JMD
Total Metals							
Boron	<0.050	0.050	mg/l	EPA 200.7	10/18/2021	10:28	SAR
Copper	<0.025	0.025	mg/l	EPA 200.7	10/18/2021	10:28	SAR
Sodium	21	2.5	mg/l	EPA 200.7	10/18/2021	10:28	SAR
Volatile Organic Compounds							
Chloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Bromomethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Vinyl Chloride	<0.40	0.40	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Chloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Methylene Chloride	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Trichlorofluoromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
1,1-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
1,1-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
trans-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Chloroform	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
1,2-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
1,1,1-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Carbon Tetrachloride	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Bromodichloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
1,2-Dichloropropane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
cis-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Trichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
trans-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	10/15/2021	17:11	AEH
1,1,2-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Dibromochloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Bromoform	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Tetrachloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Chlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
2-Chloroethyl vinyl ether	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
1,2-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
1,3-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2110-17618

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 002
Sample Description: 6S WELL#
Sample Type : GRAB
Sample Date / Time : 10/13/2021 @ 08:33

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
1,4-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Dichlorobenzenes	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Benzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Toluene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Ethylbenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
o-Xylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
m,p-Xylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Acetone	<10	10	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Acrolein	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Acrylonitrile	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Methyl Tertiary Butyl Ether (MTBE)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Carbon Disulfide	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Styrene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Vinyl Acetate	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
4-methyl-2-pentanone(MIBK)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
2-Hexanone	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
2-Butanone(MEK)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
cis-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
1,2-Dibromoethane(EDB)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Dibromomethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Bromochloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:11	AEH
Surrogates			RANGE	EPA 624.1	10/15/2021	17:11	AEH
Dibromofluoromethane	102		60-140%	EPA 624.1	10/15/2021	17:11	AEH
Toluene-D8	93		60-140%	EPA 624.1	10/15/2021	17:11	AEH
4-Bromofluorobenzene	86		60-140%	EPA 624.1	10/15/2021	17:11	AEH
ICP Digestion				EPA 200.7	10/15/2021	10:39	BB

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2110-17618

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 003
Sample Description: WELL# A8
Sample Type : GRAB
Sample Date / Time : 10/13/2021 @ 10:39

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Orthophosphate	4.2	0.020	mg/l	SM 4500 P E-2011	10/14/2021	20:40	KPG
Total Phosphorus (as P)	23	0.010	mg/l	SM4500P-B,E-2011	10/19/2021	17:25	TML
Alkalinity (as CaCO3)	120	1.0	mg/l	SM2320B 18-21ed	10/14/2021	15:40	JEP
Nitrite (as N)	<0.050	0.050	mg/l	EPA 300.0	10/14/2021	15:21	KPG
Nitrate (as N)	3.3	0.050	mg/l	EPA 300.0	10/14/2021	15:21	KPG
Chloride	580	1.0	mg/l	EPA 300.0	10/18/2021	13:29	KPG
TKN (as N)	<0.50	0.50	mg/l	SM4500NOrg-D 18-21ed	10/20/2021	11:15	JMD
Total Metals							
Boron	0.22	0.050	mg/l	EPA 200.7	10/18/2021	10:29	SAR
Copper	<0.025	0.025	mg/l	EPA 200.7	10/18/2021	10:29	SAR
Sodium	380	12	mg/l	EPA 200.7	10/18/2021	11:37	SAR
Volatile Organic Compounds							
Chloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Bromomethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Vinyl Chloride	<0.40	0.40	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Chloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Methylene Chloride	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Trichlorofluoromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
1,1-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
1,1-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
trans-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Chloroform	5.7	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
1,2-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
1,1,1-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Carbon Tetrachloride	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Bromodichloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
1,2-Dichloropropane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
cis-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Trichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
trans-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	10/15/2021	17:34	AEH
1,1,2-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Dibromochloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Bromoform	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Tetrachloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Chlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
2-Chloroethyl vinyl ether	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
1,2-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
1,3-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2110-17618

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 003
Sample Description: WELL# A8
Sample Type : GRAB
Sample Date / Time : 10/13/2021 @ 10:39

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
1,4-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Dichlorobenzenes	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Benzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Toluene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Ethylbenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
o-Xylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
m,p-Xylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Acetone	<10	10	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Acrolein	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Acrylonitrile	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Methyl Tertiary Butyl Ether (MTBE)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Carbon Disulfide	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Styrene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Vinyl Acetate	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
4-methyl-2-pentanone(MIBK)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
2-Hexanone	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
2-Butanone(MEK)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
cis-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
1,2-Dibromoethane(EDB)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Dibromomethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Bromochloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:34	AEH
Surrogates			RANGE	EPA 624.1	10/15/2021	17:34	AEH
Dibromofluoromethane	101		60-140%	EPA 624.1	10/15/2021	17:34	AEH
Toluene-D8	94		60-140%	EPA 624.1	10/15/2021	17:34	AEH
4-Bromofluorobenzene	85		60-140%	EPA 624.1	10/15/2021	17:34	AEH
ICP Digestion				EPA 200.7	10/15/2021	10:39	BB

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2110-17618

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 004
Sample Description: WELL# A11
Sample Type : GRAB
Sample Date / Time : 10/13/2021 @ 11:12

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	10/14/2021	20:40	KPG
Total Phosphorus (as P)	0.013	0.010	mg/l	SM4500P-B,E-2011	10/19/2021	17:25	TML
Alkalinity (as CaCO3)	10	1.0	mg/l	SM2320B 18-21ed	10/14/2021	15:40	JEP
Nitrite (as N)	<0.050	0.050	mg/l	EPA 300.0	10/14/2021	15:33	KPG
Nitrate (as N)	0.62	0.050	mg/l	EPA 300.0	10/14/2021	15:33	KPG
Chloride	150	1.0	mg/l	EPA 300.0	10/14/2021	15:33	KPG
TKN (as N)	<0.50	0.50	mg/l	SM4500NOrg-D 18-21ed	10/20/2021	11:15	JMD
Total Metals							
Boron	<0.050	0.050	mg/l	EPA 200.7	10/18/2021	10:35	SAR
Copper	<0.025	0.025	mg/l	EPA 200.7	10/18/2021	10:35	SAR
Sodium	78	2.5	mg/l	EPA 200.7	10/18/2021	10:35	SAR
Volatile Organic Compounds							
Chloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Bromomethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Vinyl Chloride	<0.40	0.40	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Chloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Methylene Chloride	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Trichlorofluoromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
1,1-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
1,1-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
trans-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Chloroform	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
1,2-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
1,1,1-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Carbon Tetrachloride	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Bromodichloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
1,2-Dichloropropane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
cis-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Trichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
trans-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	10/15/2021	17:57	AEH
1,1,2-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Dibromochloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Bromoform	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Tetrachloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Chlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
2-Chloroethyl vinyl ether	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
1,2-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
1,3-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2110-17618

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 004
Sample Description: WELL# A11
Sample Type : GRAB
Sample Date / Time : 10/13/2021 @ 11:12

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
1,4-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Dichlorobenzenes	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Benzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Toluene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Ethylbenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
o-Xylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
m,p-Xylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Acetone	<10	10	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Acrolein	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Acrylonitrile	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Methyl Tertiary Butyl Ether (MTBE)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Carbon Disulfide	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Styrene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Vinyl Acetate	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
4-methyl-2-pentanone(MIBK)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
2-Hexanone	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
2-Butanone(MEK)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
cis-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
1,2-Dibromoethane(EDB)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Dibromomethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Bromochloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	17:57	AEH
Surrogates			RANGE	EPA 624.1	10/15/2021	17:57	AEH
Dibromofluoromethane	99		60-140%	EPA 624.1	10/15/2021	17:57	AEH
Toluene-D8	94		60-140%	EPA 624.1	10/15/2021	17:57	AEH
4-Bromofluorobenzene	85		60-140%	EPA 624.1	10/15/2021	17:57	AEH
ICP Digestion				EPA 200.7	10/15/2021	10:39	BB

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2110-17618

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 005
Sample Description: WELL# A16
Sample Type : GRAB
Sample Date / Time : 10/13/2021 @ 10:13

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	10/14/2021	20:40	KPG
Total Phosphorus (as P)	0.011	0.010	mg/l	SM4500P-B,E-2011	10/19/2021	17:25	TML
Alkalinity (as CaCO3)	8.0	1.0	mg/l	SM2320B 18-21ed	10/14/2021	15:40	JEP
Nitrite (as N)	<0.050	0.050	mg/l	EPA 300.0	10/14/2021	15:45	KPG
Nitrate (as N)	4.7	0.050	mg/l	EPA 300.0	10/14/2021	15:45	KPG
Chloride	160	1.0	mg/l	EPA 300.0	10/14/2021	15:45	KPG
TKN (as N)	<0.50	0.50	mg/l	SM4500NOrg-D 18-21ed	10/19/2021	13:00	JMD
Total Metals							
Boron	<0.050	0.050	mg/l	EPA 200.7	10/18/2021	10:37	SAR
Copper	<0.025	0.025	mg/l	EPA 200.7	10/18/2021	10:37	SAR
Sodium	80	2.5	mg/l	EPA 200.7	10/18/2021	10:37	SAR
Volatile Organic Compounds							
Chloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Bromomethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Vinyl Chloride	<0.40	0.40	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Chloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Methylene Chloride	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Trichlorofluoromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
1,1-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
1,1-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
trans-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Chloroform	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
1,2-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
1,1,1-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Carbon Tetrachloride	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Bromodichloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
1,2-Dichloropropane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
cis-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Trichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
trans-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	10/15/2021	18:20	AEH
1,1,2-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Dibromochloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Bromoform	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Tetrachloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Chlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
2-Chloroethyl vinyl ether	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
1,2-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
1,3-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2110-17618

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 005
Sample Description: WELL# A16
Sample Type : GRAB
Sample Date / Time : 10/13/2021 @ 10:13

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
1,4-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Dichlorobenzenes	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Benzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Toluene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Ethylbenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
o-Xylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
m,p-Xylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Acetone	<10	10	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Acrolein	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Acrylonitrile	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Methyl Tertiary Butyl Ether (MTBE)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Carbon Disulfide	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Styrene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Vinyl Acetate	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
4-methyl-2-pentanone(MIBK)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
2-Hexanone	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
2-Butanone(MEK)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
cis-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
1,2-Dibromoethane(EDB)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Dibromomethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Bromochloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:20	AEH
Surrogates			RANGE	EPA 624.1	10/15/2021	18:20	AEH
Dibromofluoromethane	100		60-140%	EPA 624.1	10/15/2021	18:20	AEH
Toluene-D8	96		60-140%	EPA 624.1	10/15/2021	18:20	AEH
4-Bromofluorobenzene	85		60-140%	EPA 624.1	10/15/2021	18:20	AEH
ICP Digestion				EPA 200.7	10/15/2021	10:39	BB

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2110-17618

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 006
Sample Description: WELL# 475
Sample Type : GRAB
Sample Date / Time : 10/13/2021 @ 09:28

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	10/14/2021	20:40	KPG
Total Phosphorus (as P)	0.015	0.010	mg/l	SM4500P-B,E-2011	10/19/2021	17:25	TML
Alkalinity (as CaCO3)	5.0	1.0	mg/l	SM2320B 18-21ed	10/14/2021	15:40	JEP
Nitrite (as N)	<0.050	0.050	mg/l	EPA 300.0	10/14/2021	15:57	KPG
Nitrate (as N)	1.8	0.050	mg/l	EPA 300.0	10/14/2021	15:57	KPG
Chloride	98	1.0	mg/l	EPA 300.0	10/14/2021	15:57	KPG
TKN (as N)	<0.50	0.50	mg/l	SM4500NOrg-D 18-21ed	10/19/2021	13:00	JMD
Total Metals							
Boron	<0.050	0.050	mg/l	EPA 200.7	10/18/2021	10:38	SAR
Copper	<0.025	0.025	mg/l	EPA 200.7	10/18/2021	10:38	SAR
Sodium	51	2.5	mg/l	EPA 200.7	10/18/2021	10:38	SAR
Volatile Organic Compounds							
Chloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Bromomethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Vinyl Chloride	<0.40	0.40	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Chloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Methylene Chloride	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Trichlorofluoromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
1,1-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
1,1-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
trans-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Chloroform	1.5	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
1,2-Dichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
1,1,1-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Carbon Tetrachloride	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Bromodichloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
1,2-Dichloropropane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
cis-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Trichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
trans-1,3-Dichloropropylene	<0.40	0.40	ug/l	EPA 624.1	10/15/2021	18:44	AEH
1,1,2-Trichloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Dibromochloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Bromoform	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Tetrachloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Chlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
2-Chloroethyl vinyl ether	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
1,2-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
1,3-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2110-17618

Project Name: PLYMOUTH, MA WWTP - ID 11773 - WELLS - QUARTERLY

Sample Number: 006
Sample Description: WELL# 475
Sample Type : GRAB
Sample Date / Time : 10/13/2021 @ 09:28

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
1,4-Dichlorobenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Dichlorobenzenes	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Benzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Toluene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Ethylbenzene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
o-Xylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
m,p-Xylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Acetone	<10	10	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Acrolein	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Acrylonitrile	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Methyl Tertiary Butyl Ether (MTBE)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Carbon Disulfide	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Styrene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Vinyl Acetate	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
4-methyl-2-pentanone(MIBK)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
2-Hexanone	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
2-Butanone(MEK)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
cis-1,2-Dichloroethylene	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
1,2-Dibromoethane(EDB)	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Dibromomethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Bromochloromethane	<1.0	1.0	ug/l	EPA 624.1	10/15/2021	18:44	AEH
Surrogates			RANGE	EPA 624.1	10/15/2021	18:44	AEH
Dibromofluoromethane	95		60-140%	EPA 624.1	10/15/2021	18:44	AEH
Toluene-D8	96		60-140%	EPA 624.1	10/15/2021	18:44	AEH
4-Bromofluorobenzene	85		60-140%	EPA 624.1	10/15/2021	18:44	AEH
ICP Digestion				EPA 200.7	10/15/2021	10:39	BB

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

FOR LAB USE ONLY
Lab WO#
Project Manager

Copy of Report To		Billing Information		Project Information	
CUSTOMER:	WOODARD & CURRAN, INC.	BILL TO:	WOODARD & CURRAN, INC.	PROJECT:	PLYMOUTH, MA WWTP
ADDRESS:	131 CAMELOT DRIVE	ADDRESS:	131 CAMELOT DR.	LOCATION:	ID 11773
	PLYMOUTH, MA 02360		PLYMOUTH, Ma		WELLS - QUARTERLY
DELIVERY:	Eileen McNeil	PURCHASE ORDER #		ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL	Eileen McNeil
E-MAIL:		ATTENTION:	ACCOUNTS PAYABLE	PHONE:	508-830-4159
PHONE:	508-830-4159 FAX: 508-732-0238	PHONE:	508-830-4159	FAX:	

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	Na2SO3	HNO3	OTHER
6D Well # (250 mL)	10/13/2021	9:00		X	WW	1	X	X											X			
6D Well # (250 mL)	10/13/2021	9:00		X	WW	1			X	X								X				
6D Well # (250 mL)	10/13/2021	9:00		X	WW	1					X							X				
6D Well # (250 mL)	10/13/2021	9:00		X	WW	1						X						X				
6D Well # (250 mL)	10/13/2021	9:00		X	WW	1							X					X				
6D Well # (250 mL)	10/13/2021	9:00		X	WW	1								X	X	X					X	
6D Well # (40 mL vial)	10/13/2021	9:00		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	10/13/21	0900
RECEIVED:	10/13/21	1455
RELINQUISHED:	10/13/21	1710
RECEIVED:	10/13/21	1710
RELINQUISHED:		
RECEIVED:		

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☑ AMBIENT ☐

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2110-17618

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Lab WO#
Project Manager

Copy of Report To		Billing Information		Project Information	
CUSTOMER:	WOODARD & CURRAN, INC.	BILL TO:	WOODARD & CURRAN, INC.	PROJECT:	PLYMOUTH, MA WWTP
ADDRESS:	131 CAMELOT DRIVE	ADDRESS:	131 CAMELOT DR.	LOCATION:	ID 11773
	PLYMOUTH, MA 02360		PLYMOUTH, Ma		WELLS - QUARTERLY
DELIVERY:	Eileen McNeil	PURCHASE ORDER #		ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL	Eileen McNeil
E-MAIL:		ATTENTION:	ACCOUNTS PAYABLE	PHONE:	508-830-4159
PHONE:	508-830-4159 FAX: 508-732-0238	PHONE:	508-830-4159	FAX:	

Sample Identification	Date Collected	Time Collected	Sample Type		Sample Matrix	Number of Bottles	Analysis											Preservatives				
			COMPOSITE	GRAB			TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	NON-PRES	HS2O4	Na2SO3	HNO3	OTHER
6S Well # (250 mL)	10/13/2021	8:33		X	WW	1	X	X											X			
6S Well # (250 mL)	10/13/2021	8:33		X	WW	1			X	X								X				
6S Well # (250 mL)	10/13/2021	8:33		X	WW	1					X							X				
6S Well # (250 mL)	10/13/2021	8:33		X	WW	1						X						X				
6S Well # (250 mL)	10/13/2021	8:33		X	WW	1							X					X				
6S Well # (250 mL)	10/13/2021	8:33		X	WW	1								X	X	X					X	
6S Well # (40 mL vial)	10/13/2021	8:33		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER: Eileen Wheeler	10/13/21	0833
RECEIVED: Mel	10/13/21	1455
RELINQUISHED: Mel (8)	10/13/21	1710
RECEIVED:		
RELINQUISHED:		
RECEIVED:		

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX	☐	HARD COPY	☐	E-MAIL	☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED	☑	AMBIENT	☐

Mel

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2110-17618

FOR LAB USE ONLY

Lab WO#

Project Manager

Copy of Report To		Billing Information		Project Information	
CUSTOMER:	WOODARD & CURRAN, INC.	BILL TO:	WOODARD & CURRAN, INC.	PROJECT:	PLYMOUTH, MA WWTP
ADDRESS:	131 CAMELOT DRIVE	ADDRESS:	131 CAMELOT DR.	LOCATION:	ID 11773
	PLYMOUTH, MA 02360		PLYMOUTH, Ma		WELLS - QUARTERLY
DELIVERY:	Eileen McNeil	PURCHASE ORDER #		ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL	Eileen McNeil
E-MAIL:		ATTENTION:	ACCOUNTS PAYABLE	PHONE:	508-830-4159
PHONE:	508-830-4159 FAX: 508-732-0238	PHONE:	508-830-4159	FAX:	

Sample Identification	Date Collected	Time Collected	Sample Type		Sample Matrix	Number of Bottles	Analysis											Preservatives				
			COMPOSITE	GRAB			TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	NON-PRES	HS2O4	Na2SO3	HNO3	OTHER
Well # A8 (250 mL)	10/13/2021	10:39		X	WW	1	X	X											X			
Well # A8 (250 mL)	10/13/2021	10:39		X	WW	1			X	X								X				
Well # A8 (250 mL)(filtered)	10/13/2021	10:39		X	WW	1					X							X				
Well # A8 (250 mL)	10/13/2021	10:39		X	WW	1						X						X				
Well # A8 (250 mL)	10/13/2021	10:39		X	WW	1							X					X				
Well # A8 (250 mL)	10/13/2021	10:39		X	WW	1								X	X	X					X	
Well # A8 (40 mL vial)	10/13/2021	10:39		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	10/13/21	1039
RECEIVED: MLN	10/13/21	1455
RELINQUISHED: MLN (8)	10/13/21	1710
RECEIVED:		
RELINQUISHED:		
RECEIVED:		

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS: main plant well 8

CONDITIONS UPON RECEIPT (CHECK ONE): ☐ COMPLIANT

COOLED ☑ AMBIENT ☐

MLN 3.0

pg 3/6 2110-17618

FOR LAB USE ONLY
Lab WO#
Project Manager

Copy of Report To		Billing Information		Project Information	
CUSTOMER:	WOODARD & CURRAN, INC.	BILL TO:	WOODARD & CURRAN, INC.	PROJECT:	PLYMOUTH, MA WWTP
ADDRESS:	131 CAMELOT DRIVE	ADDRESS:	131 CAMELOT DR.	LOCATION:	ID 11773
	PLYMOUTH, MA 02360		PLYMOUTH, Ma		WELLS - QUARTERLY
DELIVERY:	Eileen McNeil	PURCHASE ORDER #		ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL	Eileen McNeil
E-MAIL:		ATTENTION:	ACCOUNTS PAYABLE	PHONE:	508-830-4159
PHONE:	508-830-4159 FAX: 508-732-0238	PHONE:	508-830-4159	FAX:	

Sample Identification	Date Collected	Time Collected	Sample Type		Sample Matrix	Number of Bottles	Analysis										Preservatives				
			COMPOSITE	GRAB			TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	NON-PRES	HS2O4	Na2SO3	HNO3	OTHER
A11 Well # (250 mL)	10/13/2021	11:12		X	WW	1	X	X											X			
A11 Well # (250 mL)	10/13/2021	11:12		X	WW	1			X	X								X				
A11 Well # (250 mL)	10/13/2021	11:12		X	WW	1					X							X				
A11 Well # (250 mL)	10/13/2021	11:12		X	WW	1						X						X				
A11 Well # (250 mL)	10/13/2021	11:12		X	WW	1							X					X				
A11 Well # (250 mL)	10/13/2021	11:12		X	WW	1								X	X	X					X	
A11 Well # (40 mL vial)	10/13/2021	11:12		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	10/13/21	1112
RECEIVED:	10/13/21	1455
RELINQUISHED:	10/13/21	1710
RECEIVED:		
RELINQUISHED:		
RECEIVED:		

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX	☐	HARD COPY	☐	E-MAIL	☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS: main plant well 8

CONDITIONS UPON RECEIPT (CHECK ONE): ☐ COMPLIANT

COOLED	☐	AMBIENT	☐

Page 17 of 19

4/6 2110-17618

FOR LAB USE ONLY
Lab WO#
Project Manager

Copy of Report To		Billing Information		Project Information	
CUSTOMER:	WOODARD & CURRAN, INC.	BILL TO:	WOODARD & CURRAN, INC.	PROJECT:	PLYMOUTH, MA WWTP
ADDRESS:	131 CAMELOT DRIVE	ADDRESS:	131 CAMELOT DR.	LOCATION:	ID 11773
	PLYMOUTH, MA 02360		PLYMOUTH, Ma		WELLS - QUARTERLY
DELIVERY:	Eileen McNeil	PURCHASE ORDER #		ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL	Eileen McNeil
E-MAIL:		ATTENTION:	ACCOUNTS PAYABLE	PHONE:	508-830-4159
PHONE:	508-830-4159 FAX: 508-732-0238	PHONE:	508-830-4159	FAX:	

Sample Identification	Date Collected	Time Collected	Sample Type: COMPOSITE	Sample Type: GRAB	Sample Matrix	Number of Bottles	Analysis: TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	Preservatives: NON-PRES	HS2O4	Na2SO3	HNO3	OTHER
A16 Well # (250 mL)	10/13/2021	10:13		X	WW	1	X	X											X			
A16 Well # (250 mL)	10/13/2021	10:13		X	WW	1			X	X								X				
A16 Well # (250 mL)	10/13/2021	10:13		X	WW	1					X							X				
A16 Well # (250 mL)	10/13/2021	10:13		X	WW	1						X						X				
A16 Well # (250 mL)	10/13/2021	10:13		X	WW	1							X					X				
A16 Well # (250 mL)	[illegible]2021	10:13		X	WW	1								X	X	X					X	
A16 Well # (40 mL vial)	10/13/2021	10:13		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER: [signature]	10/13/21	1013
RECEIVED: [signature]	10/13/21	1455
RELINQUISHED: [signature]	10/13/21	1710
RECEIVED:		
RELINQUISHED:		
RECEIVED:		

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS: [redacted]

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☑ AMBIENT ☐

[signature] 4g 5/6 2110-17618

FOR LAB USE ONLY
Lab WO#
Project Manager

Copy of Report To		Billing Information		Project Information	
CUSTOMER:	WOODARD & CURRAN, INC.	BILL TO:	WOODARD & CURRAN, INC.	PROJECT:	PLYMOUTH, MA WWTP
ADDRESS:	131 CAMELOT DRIVE	ADDRESS:	131 CAMELOT DR.	LOCATION:	ID 11773
	PLYMOUTH, MA 02360		PLYMOUTH, Ma		WELLS - QUARTERLY
DELIVERY:	Eileen McNeil	PURCHASE ORDER #		ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL	Eileen McNeil
E-MAIL:		ATTENTION:	ACCOUNTS PAYABLE	PHONE:	508-830-4159
PHONE:	508-830-4159 FAX: 508-732-0238	PHONE:	508-830-4159	FAX:	

Sample Identification	Date Collected	Time Collected	Sample Type		Sample Matrix	Number of Bottles	Analysis											Preservatives				
			COMPOSITE	GRAB			TKN	TOTAL PHOS.	NITRITE	NITRATE	ORTHO-PHOSPHATE	ALKALINITY	CHLORIDE	COPPER	BORON	SODIUM	EPA 624	NON-PRES	HS2O4	Na2SO3	HNO3	OTHER
475 Well # (250 mL)	10/13/2021	9:28		X	WW	1	X	X											X			
475 Well # (250 mL)	10/13/2021	9:28		X	WW	1			X	X								X				
475Well # (250 mL)	10/13/2021	9:28		X	WW	1					X							X				
475 Well # (250 mL)	10/13/2021	9:28		X	WW	1						X						X				
475 Well # (250 mL)	10/13/2021	9:28		X	WW	1							X					X				
475 Well # (250 mL)	10/13/2021	9:28		X	WW	1								X	X	X					X	
475 Well # (40 mL vial)	10/13/2021	9:28		X	WW	2											X			X		

CUSTODY TRANSFER	DATE	TIME
SAMPLER:	10/13/21	0928
RECEIVED:	10/13/21	1455
RELINQUISHED:	10/13/21	1710
RECEIVED:		
RELINQUISHED:		
RECEIVED:		

TURN AROUND (INDICATE IN CALENDAR DAYS):

FAX ☐ HARD COPY ☐ E-MAIL ☐

EXPIDATED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS:

CONDITIONS UPON RECEIPT (CHECK ONE): COMPLIANT ☐

COOLED ☒ AMBIENT ☐

pg 6/6

2110-17618

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Woodard & Curran, Inc.
Attn: Eileen McNeil
131 Camelot Drive
Plymouth, MA 02360

Date Received: 11/16/2021
Date Reported: 12/2/2021
P.O. Number

Work Order #: 2111-19792

Project Name: MONTHLY WELLS MAIN PLANT WWTP

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.
Work Order #: 2111-19792
Project Name: MONTHLY WELLS MAIN PLANT WWTP

Sample Number: 001
Sample Description: WELL 1S
Sample Type : GRAB
Sample Date / Time : 11/16/2021 @ 11:36

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	11/17/2021 22:00	KPG
Total Phosphorus (as P)	3.6	0.010	mg/l	SM4500P-B,E-2011	11/18/2021 14:32	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 002
Sample Description: WELL A9
Sample Type : GRAB
Sample Date / Time : 11/16/2021 @ 12:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	11/17/2021 22:00	KPG
Total Phosphorus (as P)	0.050	0.010	mg/l	SM4500P-B,E-2011	11/29/2021 16:32	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 003
Sample Description: WELL A10
Sample Type : GRAB
Sample Date / Time : 11/16/2021 @ 12:24

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	11/17/2021 22:00	KPG
Total Phosphorus (as P)	0.018	0.010	mg/l	SM4500P-B,E-2011	11/29/2021 16:32	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

R.I. ANALYTICAL
Specialists in Environmental Services

CHAIN OF CUSTODY RECORD

41 Illinois Avenue
Warwick, RI 02888-3007
Tel: 800-937-2580

131 Coolidge St., Suite 105
Hudson, MA 01749-1331
Tel: 800-937-2580

Date Collected	Time Collected	Field Sample Identification	10-14-20 Grab or Composite	# of Containers & Type C	Preservation Code P	Matrix Code M		TP -TOTAL PHOS		ORTHO – ORTHO PHOS
11/16/21	11:36	WELL 1S 250 mL	G	1P	NP	GW				X
11/16/21	11:36	WELL 1S 250 mL	G	1P	S	GW		X		
11/16/21	12:00	WELL A9 250 mL	G	1P	NP	GW				X
11/16/21	12:00	WELL A9 250 mL	G	1P	S	GW		X		
11/16/21	12:24	WELL A10 250 mL	G	1P	NP	GW				X
11/16/21	12:24	WELL A10 250 mL	G	1P	S	GW		X		

Client Information		Project Information			
Company Name:	Woodard & Curran	Project Name:	Monthly---- wells main plant --- WWTP		
Address:	131 Camelot Drive	P.O. Number:		Project Number:	
City / State / Zip:	Plymouth MA 02360	Report To:	E. McNeil	Cell: 774-608-1213	Phone: 508-830-4159
Main Telephone:	508-830-4159 x207	Sampled by:		Email addresses	
Contact Person:	Eileen L. McNeil	Quote No:			

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
RL	11/16/21	15:10		11/16/21	1510
	11/16/21	1810			

Turn Around Time			
X	Normal	X	EMAIL Report
X	5-7 Business days		
	Rush – Date Due: ___/___/___		

Reporting Options	Project Comments	Lab Use Only
MCP Standard _____	Email results to emcneil@woodardcurran.com; jfreeman@woodardcurran.com; sdriscoll@woodardcurran.com, swhalen@woodardcurran.com, ktracey@woodardcurran.com, RIJones@woodardcurran.com. RIL 5.5	Sample Pick Up Only
MWRA eSMART		RIAL sampled; attach field hours
State Report & Upload		Received on Ice / No Ice
		Workorder No: 21L-19792

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, DI=DI-H_2O, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc
Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, WP=Wipe, O=_____

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Woodard & Curran. Inc.
Attn: Eileen McNeil
131 Camelot Drive
Plymouth MA. 02360

Date Received: 11/9/2021
Date Reported: 11/18/2021
P.O. Number

Work Order #: 2111-19384

Project Name: MONTHLY - WELLS MAIN PLANT - WWTP

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2111-19384

Project Name: MONTHLY - WELLS MAIN PLANT - WWTP

Sample Number: 001
Sample Description: WELL 6S
Sample Type : GRAB
Sample Date / Time : 11/09/2021 @ 09:04

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	11/10/2021 21:06	KPG
Total Phosphorus (as P)	0.010	0.010	mg/l	SM4500P-B,E-2011	11/15/2021 14:25	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 002
Sample Description: WELL 6D
Sample Type : GRAB
Sample Date / Time : 11/09/2021 @ 09:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	11/10/2021 21:06	KPG
Total Phosphorus (as P)	0.028	0.010	mg/l	SM4500P-B,E-2011	11/15/2021 14:25	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 003
Sample Description: WELL 475
Sample Type : GRAB
Sample Date / Time : 11/09/2021 @ 09:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	11/10/2021 21:06	KPG
Total Phosphorus (as P)	0.028	0.010	mg/l	SM4500P-B,E-2011	11/15/2021 14:25	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.
Work Order #: 2111-19384
Project Name: MONTHLY - WELLS MAIN PLANT - WWTP

Sample Number: 004
Sample Description: WELL A11
Sample Type : GRAB
Sample Date / Time : 11/09/2021 @ 10:46

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	11/10/2021 21:06	KPG
Total Phosphorus (as P)	0.014	0.010	mg/l	SM4500P-B,E-2011	11/15/2021 14:25	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 005
Sample Description: WELL A16
Sample Type : GRAB
Sample Date / Time : 11/09/2021 @ 11:05

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	11/10/2021 21:06	KPG
Total Phosphorus (as P)	0.018	0.010	mg/l	SM4500P-B,E-2011	11/15/2021 14:25	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 006
Sample Description: WELL A8
Sample Type : GRAB
Sample Date / Time : 11/09/2021 @ 11:27

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	3.6	0.020	mg/l	SM 4500 P E-2011	11/10/2021 21:06	KPG
Total Phosphorus (as P)	3.5	0.010	mg/l	SM4500P-B,E-2011	11/15/2021 14:25	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Orthophosphate - Result is greater than Total Phosphorus (as P), however results are within Duplicate criteria of each other.

R.I. ANALYTICAL
Specialists in Environmental Services

CHAIN OF CUSTODY RECORD

41 Illinois Avenue
Warwick, RI 02888-3007
Tel: 800-937-2580

131 Coolidge St., Suite 105
Hudson, MA 01749-1331
Tel: 800-937-2580

Date Collected	Time Collected	Field Sample Identification	Grab or Composite (10-14-20)	# of Containers & Type C	Preservation Code P	Matrix Code M		TP -TOTAL PHOS		ORTHO – ORTHO PHOS
11/9/21	0904	WELL 6S 250 mL	G	1P	NP	GW				X
11/9/21	0904	WELL 6S 250 mL	G	1P	S	GW		X		
11/9/21	0930	WELL 6D 250 mL	G	1P	NP	GW				X
11/9/21	0930	WELL 6D 250 mL	G	1P	S	GW		X		
11/9/21	0950	WELL 475 250 mL	G	1P	NP	GW				X
11/9/21	0950	WELL 475 250 mL	G	1P	S	GW		X		
11/9/21	1046	WELL A11 250 mL	G	1P	NP	GW				X
11/9/21	1046	WELL A11 250 mL	G	1P	S	GW		X		
11/9/21	1105	WELL A16 250 mL	G	1P	NP	GW				X
11/9/21	1105	WELL A16 250 mL	G	1P	S	GW		X		

Client Information		Project Information			
Company Name:	Woodard & Curran	Project Name:	Monthly---- wells main plant --- WWTP		
Address:	131 Camelot Drive	P.O. Number:		Project Number:	
City / State / Zip:	Plymouth MA 02360	Report To:	E. McNeil	Cell: 774-608-1213	Phone: 508-830-4159
Main Telephone:	508-830-4159 x207	Sampled by:		Email addresses	
Contact Person:	Eileen L. McNeil	Quote No:			

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
	11/9/21	1507		11/9/21	1507
	11/9/21	1745		11-9-21	1745

Turn Around Time			
X	Normal	X	EMAIL Report
X	5-7 Business days		
	Rush – Date Due: ___/___/___		

Reporting Options	Project Comments
MCP Standard _____	Email results to emcneil@woodardcurran.com; jfreeman@woodardcurran.com; sdriscoll@woodardcurran.com, swhalen@woodardcurran.com, ktracey@woodardcurran.com, RIJones@woodardcurran.com.
MWRA eSMART	
State Report & Upload	

Lab Use Only			
	Sample Pick Up Only		
	RIAL sampled; attach field hours		
	Received on Ice		No Ice
Workorder No: 2111-19384			

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, DI=DI-H_2O, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc
Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, WP=Wipe, O=_____

R.I. ANALYTICAL
Specialists in Environmental Services

CHAIN OF CUSTODY RECORD

41 Illinois Avenue
Warwick, RI 02888-3007
Tel: 800-937-2580

131 Coolidge St., Suite 105
Hudson, MA 01749-1331
Tel: 800-937-2580

Date Collected	Time Collected	Field Sample Identification	Grab or Composite (10-14-20)	# of Containers & Type C	Preservation Code P	Matrix Code M		TP -TOTAL PHOS		ORTHO – ORTHO PHOS
11/9/21	11:27	WELL A8 250 mL	G	1P	NP	GW				X
11/9/21	11:27	WELL A8 250 mL	G	1P	S	GW		X		

Client Information		Project Information			
Company Name:	Woodard & Curran	Project Name:	Monthly---- wells main plant --- WWTP		
Address:	131 Camelot Drive	P.O. Number:	Project Number:		
City / State / Zip:	Plymouth MA 02360	Report To:	E. McNeil	Cell: 774-608-1213	Phone: 508-830-4159
Main Telephone:	508-830-4159 x207	Sampled by:		Email addresses	
Contact Person:	Eileen L. McNeil	Quote No:			

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
	11/9/21	1507		11/9/21	1507
	11/9/21	1745		11/9/21	1745

Turn Around Time			
X	Normal	X	EMAIL Report
X	5-7 Business days		
	Rush – Date Due: ___/___/___		

Reporting Options
MCP Standard _____
MWRA eSMART
State Report & Upload

Project Comments

Email results to emcneil@woodardcurran.com; jfreeman@woodardcurran.com; sdriscoll@woodardcurran.com, swhalen@woodardcurran.com, ktracey@woodardcurran.com, RIJones@woodardcurran.com.

Lab Use Only		
	Sample Pick Up Only	
	RIAL sampled; attach field hours	
	Received on Ice	No Ice
Workorder No: 21L-19384		

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, DI=DI-H_2O, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc
Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, WP=Wipe, O=_____

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Woodard & Curran. Inc.
Attn: Eileen McNeil
131 Camelot Drive
Plymouth MA. 02360

Date Received: 11/9/2021
Date Reported: 11/18/2021
P.O. Number

Work Order #: 2111-19384

Project Name: MONTHLY - WELLS MAIN PLANT - WWTP

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2111-19384

Project Name: MONTHLY - WELLS MAIN PLANT - WWTP

Sample Number: 001
Sample Description: WELL 6S
Sample Type : GRAB
Sample Date / Time : 11/09/2021 @ 09:04

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	11/10/2021 21:06	KPG
Total Phosphorus (as P)	0.010	0.010	mg/l	SM4500P-B,E-2011	11/15/2021 14:25	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 002
Sample Description: WELL 6D
Sample Type : GRAB
Sample Date / Time : 11/09/2021 @ 09:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	11/10/2021 21:06	KPG
Total Phosphorus (as P)	0.028	0.010	mg/l	SM4500P-B,E-2011	11/15/2021 14:25	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 003
Sample Description: WELL 475
Sample Type : GRAB
Sample Date / Time : 11/09/2021 @ 09:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	11/10/2021 21:06	KPG
Total Phosphorus (as P)	0.028	0.010	mg/l	SM4500P-B,E-2011	11/15/2021 14:25	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.
Work Order #: 2111-19384
Project Name: MONTHLY - WELLS MAIN PLANT - WWTP

Sample Number: 004
Sample Description: WELL A11
Sample Type : GRAB
Sample Date / Time : 11/09/2021 @ 10:46

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	11/10/2021 21:06	KPG
Total Phosphorus (as P)	0.014	0.010	mg/l	SM4500P-B,E-2011	11/15/2021 14:25	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 005
Sample Description: WELL A16
Sample Type : GRAB
Sample Date / Time : 11/09/2021 @ 11:05

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	11/10/2021 21:06	KPG
Total Phosphorus (as P)	0.018	0.010	mg/l	SM4500P-B,E-2011	11/15/2021 14:25	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 006
Sample Description: WELL A8
Sample Type : GRAB
Sample Date / Time : 11/09/2021 @ 11:27

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	3.6	0.020	mg/l	SM 4500 P E-2011	11/10/2021 21:06	KPG
Total Phosphorus (as P)	3.5	0.010	mg/l	SM4500P-B,E-2011	11/15/2021 14:25	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Orthophosphate - Result is greater than Total Phosphorus (as P), however results are within Duplicate criteria of each other.

R.I. ANALYTICAL
Specialists in Environmental Services

CHAIN OF CUSTODY RECORD

41 Illinois Avenue
Warwick, RI 02888-3007
Tel: 800-937-2580

131 Coolidge St., Suite 105
Hudson, MA 01749-1331
Tel: 800-937-2580

Date Collected	Time Collected	Field Sample Identification	Grab or Composite (10-14-20)	# of Containers & Type C	Preservation Code P	Matrix Code M		TP -TOTAL PHOS		ORTHO – ORTHO PHOS
11/9/21	0904	WELL 6S 250 mL	G	1P	NP	GW				X
11/9/21	0904	WELL 6S 250 mL	G	1P	S	GW		X		
11/9/21	0930	WELL 6D 250 mL	G	1P	NP	GW				X
11/9/21	0930	WELL 6D 250 mL	G	1P	S	GW		X		
11/9/21	0950	WELL 475 250 mL	G	1P	NP	GW				X
11/9/21	0950	WELL 475 250 mL	G	1P	S	GW		X		
11/9/21	1046	WELL A11 250 mL	G	1P	NP	GW				X
11/9/21	1046	WELL A11 250 mL	G	1P	S	GW		X		
11/9/21	1105	WELL A16 250 mL	G	1P	NP	GW				X
11/9/21	1105	WELL A16 250 mL	G	1P	S	GW		X		

Client Information		Project Information			
Company Name:	Woodard & Curran	Project Name:	Monthly---- wells main plant --- WWTP		
Address:	131 Camelot Drive	P.O. Number:		Project Number:	
City / State / Zip:	Plymouth MA 02360	Report To:	E. McNeil	Cell: 774-608-1213	Phone: 508-830-4159
Main Telephone:	508-830-4159 x207	Sampled by:		Email addresses	
Contact Person:	Eileen L. McNeil	Quote No:			

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
	11/9/21	1507		11/9/21	1507
	11/9/21	1745		11-9-21	1745

Turn Around Time			
X	Normal	X	EMAIL Report
X	5-7 Business days		
	Rush – Date Due: ___/___/___		

Reporting Options	Project Comments
MCP Standard _____	Email results to emcneil@woodardcurran.com; jfreeman@woodardcurran.com; sdriscoll@woodardcurran.com, swhalen@woodardcurran.com, ktracey@woodardcurran.com, RIJones@woodardcurran.com.
MWRA eSMART	
State Report & Upload	

Lab Use Only			
	Sample Pick Up Only		
	RIAL sampled; attach field hours		
	Received on Ice		No Ice
Workorder No: 2111-19384			

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, DI=DI-H_2O, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc
Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, WP=Wipe, O=_____

R.I. ANALYTICAL
Specialists in Environmental Services

CHAIN OF CUSTODY RECORD

41 Illinois Avenue
Warwick, RI 02888-3007
Tel: 800-937-2580

131 Coolidge St., Suite 105
Hudson, MA 01749-1331
Tel: 800-937-2580

Date Collected	Time Collected	Field Sample Identification	Grab or Composite (10-14-20)	# of Containers & Type C	Preservation Code P	Matrix Code M		TP -TOTAL PHOS		ORTHO – ORTHO PHOS
11/9/21	11:27	WELL A8 250 mL	G	1P	NP	GW				X
11/9/21	11:27	WELL A8 250 mL	G	1P	S	GW		X		

Client Information		Project Information			
Company Name:	Woodard & Curran	Project Name:	Monthly---- wells main plant --- WWTP		
Address:	131 Camelot Drive	P.O. Number:	Project Number:		
City / State / Zip:	Plymouth MA 02360	Report To:	E. McNeil	Cell: 774-608-1213	Phone: 508-830-4159
Main Telephone:	508-830-4159 x207	Sampled by:		Email addresses	
Contact Person:	Eileen L. McNeil	Quote No:			

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
	11/9/21	1507		11/9/21	1507
	11/9/21	1745		11/9/21	1745

Turn Around Time			
X	Normal	X	EMAIL Report
X	5-7 Business days		
	Rush – Date Due: ___/___/___		

Reporting Options
MCP Standard _____
MWRA eSMART
State Report & Upload

Project Comments

Email results to emcneil@woodardcurran.com; jfreeman@woodardcurran.com; sdriscoll@woodardcurran.com, swhalen@woodardcurran.com, ktracey@woodardcurran.com, RIJones@woodardcurran.com.

Lab Use Only		
	Sample Pick Up Only	
	RIAL sampled; attach field hours	
	Received on Ice	No Ice
Workorder No: 21L-19384		

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, DI=DI-H_2O, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc
Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, WP=Wipe, O=_____

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Woodard & Curran. Inc.
Attn: Eileen McNeil
131 Camelot Drive
Plymouth MA. 02360

Date Received: 11/9/2021
Date Reported: 11/18/2021
P.O. Number

Work Order #: 2111-19384

Project Name: MONTHLY - WELLS MAIN PLANT - WWTP

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.

Work Order #: 2111-19384

Project Name: MONTHLY - WELLS MAIN PLANT - WWTP

Sample Number: 001
Sample Description: WELL 6S
Sample Type : GRAB
Sample Date / Time : 11/09/2021 @ 09:04

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	11/10/2021 21:06	KPG
Total Phosphorus (as P)	0.010	0.010	mg/l	SM4500P-B,E-2011	11/15/2021 14:25	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 002
Sample Description: WELL 6D
Sample Type : GRAB
Sample Date / Time : 11/09/2021 @ 09:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	11/10/2021 21:06	KPG
Total Phosphorus (as P)	0.028	0.010	mg/l	SM4500P-B,E-2011	11/15/2021 14:25	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 003
Sample Description: WELL 475
Sample Type : GRAB
Sample Date / Time : 11/09/2021 @ 09:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	11/10/2021 21:06	KPG
Total Phosphorus (as P)	0.028	0.010	mg/l	SM4500P-B,E-2011	11/15/2021 14:25	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.
Work Order #: 2111-19384
Project Name: MONTHLY - WELLS MAIN PLANT - WWTP

Sample Number: 004
Sample Description: WELL A11
Sample Type : GRAB
Sample Date / Time : 11/09/2021 @ 10:46

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	11/10/2021 21:06	KPG
Total Phosphorus (as P)	0.014	0.010	mg/l	SM4500P-B,E-2011	11/15/2021 14:25	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 005
Sample Description: WELL A16
Sample Type : GRAB
Sample Date / Time : 11/09/2021 @ 11:05

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	11/10/2021 21:06	KPG
Total Phosphorus (as P)	0.018	0.010	mg/l	SM4500P-B,E-2011	11/15/2021 14:25	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 006
Sample Description: WELL A8
Sample Type : GRAB
Sample Date / Time : 11/09/2021 @ 11:27

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Orthophosphate	3.6	0.020	mg/l	SM 4500 P E-2011	11/10/2021 21:06	KPG
Total Phosphorus (as P)	3.5	0.010	mg/l	SM4500P-B,E-2011	11/15/2021 14:25	TML

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Orthophosphate - Result is greater than Total Phosphorus (as P), however results are within Duplicate criteria of each other.

R.I. ANALYTICAL
Specialists in Environmental Services

CHAIN OF CUSTODY RECORD

41 Illinois Avenue
Warwick, RI 02888-3007
Tel: 800-937-2580

131 Coolidge St., Suite 105
Hudson, MA 01749-1331
Tel: 800-937-2580

Date Collected	Time Collected	Field Sample Identification	Grab or Composite (10-14-20)	# of Containers & Type C	Preservation Code P	Matrix Code M		TP -TOTAL PHOS		ORTHO – ORTHO PHOS
11/9/21	0904	WELL 6S 250 mL	G	1P	NP	GW				X
11/9/21	0904	WELL 6S 250 mL	G	1P	S	GW		X		
11/9/21	0930	WELL 6D 250 mL	G	1P	NP	GW				X
11/9/21	0930	WELL 6D 250 mL	G	1P	S	GW		X		
11/9/21	0950	WELL 475 250 mL	G	1P	NP	GW				X
11/9/21	0950	WELL 475 250 mL	G	1P	S	GW		X		
11/9/21	1046	WELL A11 250 mL	G	1P	NP	GW				X
11/9/21	1046	WELL A11 250 mL	G	1P	S	GW		X		
11/9/21	1105	WELL A16 250 mL	G	1P	NP	GW				X
11/9/21	1105	WELL A16 250 mL	G	1P	S	GW		X		

Client Information		Project Information			
Company Name:	Woodard & Curran	Project Name:	Monthly---- wells main plant --- WWTP		
Address:	131 Camelot Drive	P.O. Number:		Project Number:	
City / State / Zip:	Plymouth MA 02360	Report To:	E. McNeil	Cell: 774-608-1213	Phone: 508-830-4159
Main Telephone:	508-830-4159 x207	Sampled by:		Email addresses	
Contact Person:	Eileen L. McNeil	Quote No:			

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
	11/9/21	1507		11/9/21	1507
	11/9/21	1745		11-9-21	1745

Turn Around Time			
X	Normal	X	EMAIL Report
X	5-7 Business days		
	Rush – Date Due: ___/___/___		

Reporting Options	Project Comments
MCP Standard _____	Email results to emcneil@woodardcurran.com; jfreeman@woodardcurran.com; sdriscoll@woodardcurran.com, swhalen@woodardcurran.com, ktracey@woodardcurran.com, RIJones@woodardcurran.com.
MWRA eSMART	
State Report & Upload	

Lab Use Only			
	Sample Pick Up Only		
	RIAL sampled; attach field hours		
	Received on Ice		No Ice
Workorder No: 2111-19384			

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, DI=DI-H_2O, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc
Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, WP=Wipe, O=_____

R.I. ANALYTICAL
Specialists in Environmental Services

CHAIN OF CUSTODY RECORD

41 Illinois Avenue
Warwick, RI 02888-3007
Tel: 800-937-2580

131 Coolidge St., Suite 105
Hudson, MA 01749-1331
Tel: 800-937-2580

Date Collected	Time Collected	Field Sample Identification	Grab or Composite (10-14-20)	# of Containers & Type C	Preservation Code P	Matrix Code M		TP -TOTAL PHOS		ORTHO – ORTHO PHOS
11/9/21	11:27	WELL A8 250 mL	G	1P	NP	GW				X
11/9/21	11:27	WELL A8 250 mL	G	1P	S	GW		X		

Client Information		Project Information			
Company Name:	Woodard & Curran	Project Name:	Monthly---- wells main plant --- WWTP		
Address:	131 Camelot Drive	P.O. Number:	Project Number:		
City / State / Zip:	Plymouth MA 02360	Report To:	E. McNeil	Cell: 774-608-1213	Phone: 508-830-4159
Main Telephone:	508-830-4159 x207	Sampled by:		Email addresses	
Contact Person:	Eileen L. McNeil	Quote No:			

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
	11/9/21	1507		11/9/21	1507
	11/9/21	1745		11/9/21	1745

Turn Around Time			
X	Normal	X	EMAIL Report
X	5-7 Business days		
	Rush – Date Due: ___/___/___		

Reporting Options
MCP Standard _____
MWRA eSMART
State Report & Upload

Project Comments

Email results to emcneil@woodardcurran.com; jfreeman@woodardcurran.com; sdriscoll@woodardcurran.com, swhalen@woodardcurran.com, ktracey@woodardcurran.com, RIJones@woodardcurran.com.

Lab Use Only		
	Sample Pick Up Only	
	RIAL sampled; attach field hours	
	Received on Ice	No Ice
Workorder No: 21L-19384		

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, DI=DI-H_2O, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc
Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, WP=Wipe, O=_____

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Woodard & Curran, Inc.
Attn: Sean Driscoll
131 Camelot Drive
Plymouth, MA 02360

Date Received: 12/1/2021
Date Reported: 12/9/2021
P.O. Number

Work Order #: 2112-20596

Project Name: MONTHLY - WELLS MAIN PLANT - WWTP

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.
Work Order #: 2112-20596
Project Name: MONTHLY - WELLS MAIN PLANT - WWTP

Sample Number: 001
Sample Description: WELL 6S
Sample Type : GRAB
Sample Date / Time : 12/01/2021 @ 08:13

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Phosphorus (as P)	0.027	0.010	mg/l	SM4500P-B,E-2011	12/7/2021	15:19	TML
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	12/1/2021	20:54	KPG

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 002
Sample Description: WELL 6D
Sample Type : GRAB
Sample Date / Time : 12/01/2021 @ 08:38

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Phosphorus (as P)	0.024	0.010	mg/l	SM4500P-B,E-2011	12/7/2021	15:19	TML
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	12/1/2021	20:54	KPG

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 003
Sample Description: WELL 475
Sample Type : GRAB
Sample Date / Time : 12/01/2021 @ 09:02

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Phosphorus (as P)	<0.010	0.010	mg/l	SM4500P-B,E-2011	12/7/2021	15:19	TML
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	12/1/2021	20:54	KPG

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.
Work Order #: 2112-20596
Project Name: MONTHLY - WELLS MAIN PLANT - WWTP

Sample Number: 004
Sample Description: WELL 1S
Sample Type : GRAB
Sample Date / Time : 12/01/2021 @ 09:47

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Phosphorus (as P)	<0.010	0.010	mg/l	SM4500P-B,E-2011	12/7/2021	15:19	TML
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	12/1/2021	20:54	KPG

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 005
Sample Description: WELL A9
Sample Type : GRAB
Sample Date / Time : 12/01/2021 @ 10:17

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Phosphorus (as P)	0.055	0.010	mg/l	SM4500P-B,E-2011	12/7/2021	15:19	TML
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	12/1/2021	20:54	KPG

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 006
Sample Description: WELL A10
Sample Type : GRAB
Sample Date / Time : 12/01/2021 @ 10:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Phosphorus (as P)	<0.010	0.010	mg/l	SM4500P-B,E-2011	12/8/2021	14:34	TML
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	12/1/2021	20:54	KPG

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.
Work Order #: 2112-20596
Project Name: MONTHLY - WELLS MAIN PLANT - WWTP

Sample Number: 007
Sample Description: WELL A16
Sample Type : GRAB
Sample Date / Time : 12/01/2021 @ 11:08

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Phosphorus (as P)	0.013	0.010	mg/l	SM4500P-B,E-2011	12/8/2021	14:34	TML
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	12/1/2021	20:54	KPG

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Sample Number: 008
Sample Description: WELL A8
Sample Type : GRAB
Sample Date / Time : 12/01/2021 @ 11:32

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Phosphorus (as P)	2.7	0.010	mg/l	SM4500P-B,E-2011	12/8/2021	14:34	TML
Orthophosphate	2.813	0.020	mg/l	SM 4500 P E-2011	12/1/2021	20:54	KPG

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

Orthophosphate - Result is greater than Total Phosphorus (as P), however results are within Duplicate criteria of each other.

Sample Number: 009
Sample Description: WELL A11
Sample Type : GRAB
Sample Date / Time : 12/01/2021 @ 11:56

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Phosphorus (as P)	0.047	0.010	mg/l	SM4500P-B,E-2011	12/8/2021	14:34	TML
Orthophosphate	<0.020	0.020	mg/l	SM 4500 P E-2011	12/1/2021	20:54	KPG

Orthophosphate - Filtered upon receipt at the laboratory. The filtration should occur within fifteen minutes of sample collection.

R.I. Analytical Laboratories, Inc.

Laboratory Report

Woodard & Curran, Inc.
Work Order #: 2112-20596
Project Name: MONTHLY - WELLS MAIN PLANT - WWTP

(41)

R.I. ANALYTICAL
Specialists in Environmental Services

CHAIN OF CUSTODY RECORD

41 Illinois Avenue
Warwick, RI 02888-3007
Tel: 800-937-2580

131 Coolidge St., Suite 105
Hudson, MA 01749-1331
Tel: 800-937-2580

Date Collected	Time Collected	Field Sample Identification	Grab or Composite (10-14-20)	# of Containers & Type C	Preservation Code P	Matrix Code M		TP -TOTAL PHOS		ORTHO – ORTHO PHOS
12/1/21	8:13	WELL 6S 250 mL	G	1P	NP	GW				X
12/1/21	8:13	WELL 6S 250 mL	G	1P	S	GW		X		
12/1/21	8:38	WELL 6D 250 mL	G	1P	NP	GW				X
12/1/21	8:38	WELL 6D 250 mL	G	1P	S	GW		X		
12/1/21	9:02	WELL 475 250 mL	G	1P	NP	GW				X
12/1/21	9:02	WELL 475 250 mL	G	1P	S	GW		X		
12/1/21	9:47	WELL 1S 250 mL	G	1P	NP	GW				X
12/1/21	9:47	WELL 1S 250 mL	G	1P	S	GW		X		
12/1/21	10:17	WELL A9 250 mL	G	1P	NP	GW				X
12/1/21	10:17	WELL A9 250 mL	G	1P	S	GW		X		

Client Information		Project Information			
Company Name:	Woodard & Curran	Project Name:	Monthly---- wells main plant --- WWTP		
Address:	131 Camelot Drive	P.O. Number:		Project Number:	
City / State / Zip:	Plymouth MA 02360	Report To:	S. Driscoll	Cell: 401-578-9976	Phone: 508-830-4159
Main Telephone:	508-830-4159 x207	Sampled by:		Email addresses	
Contact Person:	Sean Driscoll	Quote No:			

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
	12/1/21	1425	RL	12/1/21	1425
RL	12/1/21	1600		12-1-21	1600

Turn Around Time			
X	Normal	X	EMAIL Report
X	5-7 Business days		
	Rush – Date Due: ___/___/___		

Reporting Options	
	MCP Standard _____
	MWRA eSMART
	State Report & Upload

Project Comments

Email results to emcneil@woodardcurran.com; jfreeman@woodardcurran.com; sdriscoll@woodardcurran.com, swhalen@woodardcurran.com, ktracey@woodardcurran.com, RIJones@woodardcurran.com.

RL
5.5°C

Lab Use Only		
	Sample Pick Up Only	
	RIAL sampled; attach field hours	
	Received on Ice	No Ice
Workorder No: 2112-20596		

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, DI=DI-H_2O, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc
Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, WP=Wipe, O=_____

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Hudson, MA 01749-1331
Tel: 800-937-2580

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type [C]	Preservation Code [P]	Matrix Code [M]		TP -TOTAL PHOS		ORTHO – ORTHO PHOS
10-14-20										
12/1/21	10:45	WELL A10 250 mL	G	1P	NP	GW				X
12/1/21	10:45	WELL A10 250 mL	G	1P	S	GW		X		
12/1/21	11:08	WELL A16 250 mL	G	1P	NP	GW				X
12/1/21	11:08	WELL A16 250 mL	G	1P	S	GW		X		
12/1/21	11:32	WELL A8 250 mL	G	1P	NP	GW				X
12/1/21	11:32	WELL A8 250 mL	G	1P	S	GW		X		
12/1/21	11:56	WELL A11 250 mL	G	1P	NP	GW				X
12/1/21	11:56	WELL A11 250 mL	G	1P	S	GW		X		

Client Information

Company Name:	Woodard & Curran
Address:	131 Camelot Drive
City / State / Zip:	Plymouth MA 02360
Main Telephone:	508-830-4159 x207
Contact Person:	Sean Driscoll

Project Information

Project Name:	Monthly---- wells main plant --- WWTP		
P.O. Number:		Project Number:	
Report To:	S. Driscoll	Cell: 401-578-9976	Phone: 508-830-4159
Sampled by:		Email addresses	
Quote No:			

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
	12/1/21	1425		12/1/21	1425
	12/1/21	1600			

Turn Around Time

X	Normal	X	EMAIL Report
X	5-7 Business days		
	Rush – Date Due: ___/___/___		

Reporting Options

- [ ] MCP Standard _____
- [ ] MWRA eSMART
- [ ] State Report & Upload

Project Comments

Email results to emcneil@woodardcurran.com; jfreeman@woodardcurran.com; sdriscoll@woodardcurran.com, swhalen@woodardcurran.com, ktracey@woodardcurran.com, RIJones@woodardcurran.com.

n11
5.5°C

Lab Use Only

	Sample Pick Up Only		
	RIAL sampled; attach field hours		
	Received on Ice		No Ice
Workorder No: 2112-20396			

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, DI=DI-H_2O, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc
Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, WP=Wipe, O=_____

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, June 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *GW Eel River*
Project Number: *7S*
Sampled By: *Kim Tower*
Lab Order Number: *WW-210576*
Date Received: *03/11/21*

Comments:

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
7S A	13:55	03/11/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	0.53	NA	06/15/21	KB	Calculation
Total Dissolved Solids	mg/L	550	6.0	03/18/21	AMB	SM 2540 C
Total Organic Carbon*	mg/L	0.216	0.017	03/11/21	NEC*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND	*	03/16/21	NEC*	*
Total Iron	mg/L	0.05	0.01	03/18/21	KB	EPA 200.7
Boron	mg/L	BRL	0.010	03/18/21	KB	EPA 200.7
Copper	mg/L	BRL	0.003	03/18/21	KB	EPA 200.7
Nitrate-N	mg/L	0.26	0.01	03/12/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	03/12/21	SD	EPA 300.0
Total Kjeldhal Nitrogen	mg/L	0.27	0.2	04/02/21	KB	SM4500-Norg B-C
Chloride	mg/L	340	3.0	03/11/21	SD	EPA 300.0
Mercury*	mg/L	BRL	0.0005	03/15/21	RIA*	EPA 245.1
Total Phosphorous (P)	mg/L	0.007	0.005	04/01/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.25	0.20	04/02/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.014	0.017	03/11/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.26	NA	06/15/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.25	NA	06/15/21	KB	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	03/11/21	TM/KB	SM 4500-P
Particulate Organic Carbon	mg/L	0.202	NA	04/08/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.02	NA	06/15/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.51	NA	04/06/21	KB	Calculation
Ammonia-N	mg/L	BRL	0.02	03/11/21	TM/KB	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, June 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*GW Eel River*	***Comments:***
Project Number:	*7S*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-210576*	
Date Received:	*03/11/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
7S A	13:55	03/11/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

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Tuesday, June 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*GW Eel River*	***Comments:***
Project Number:	*A13*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-210577*	
Date Received:	*03/11/21*	

Sample Type A13 A	***Sample Time*** 10:25	***Sample Date*** 03/11/21	***Comments***			
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	0.62	NA	06/15/21	KB	Calculation
Total Dissolved Solids	mg/L	619	6.0	03/18/21	AMB	SM 2540 C
Total Organic Carbon*	mg/L	0.699	0.017	03/11/21	NEC*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND	*	03/16/21	NEC	*
Total Iron	mg/L	1.96	0.01	03/18/21	KB	EPA 200.7
Boron	mg/L	0.019	0.010	03/18/21	KB	EPA 200.7
Copper	mg/L	BRL	0.003	03/18/21	KB	EPA 200.7
Nitrate-N	mg/L	0.15	0.01	03/12/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	03/12/21	SD	EPA 300.0
Ammonia-N *	mg/L	0.22	0.02	03/11/21	TM/KB	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.47	0.2	04/02/21	KB	SM4500-Norg B-C
Chloride	mg/L	380	3.0	03/11/21	SD	EPA 300.0
Mercury*	mg/L	BRL	0.0005	03/15/21	RIA*	EPA 245.1
Total Phosphorous (P)	mg/L	0.026	0.005	04/01/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.45	0.20	04/02/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.400	0.017	03/11/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.37	NA	06/15/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.23	NA	06/15/21	KB	Calculation
Ortho Phosphorous (P)	mg/L	0.010	0.005	03/11/21	TM/KB	SM 4500-P
Particulate Organic Carbon	mg/L	0.299	NA	04/08/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.02	NA	06/15/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.60	NA	04/06/21	KB	Calculation

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****see attached***

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Ronald J. Saari
Laboratory Director

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Tuesday, June 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*GW Eel River*	***Comments:***
Project Number:	*A13*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-210577*	
Date Received:	*03/11/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
A13 A	10:25	03/11/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

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Ronald J. Saari
Laboratory Director

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FAX (508)888-6446

Tuesday, June 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *GW Eel River*
Project Number: *A17*
Sampled By: *Kim Tower*
Lab Order Number: *WW-210578*
Date Received: *03/11/21*

Comments:

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
A17 A	12:40	03/11/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	2.9	NA	06/15/21	KB	Calculation
Total Dissolved Solids	mg/L	310	6.0	03/18/21	AMB	SM 2540 C
Total Organic Carbon*	mg/L	0.287	0.017	03/11/21	NEC*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND	*	03/17/21	NEC*	*
Total Iron	mg/L	0.01	0.01	03/18/21	KB	EPA 200.7
Boron	mg/L	0.010	0.010	03/18/21	KB	EPA 200.7
Copper	mg/L	BRL	0.003	03/18/21	KB	EPA 200.7
Nitrate-N	mg/L	2.90	0.01	03/12/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	03/12/21	SD	EPA 300.0
Ammonia-N *	mg/L	BRL	0.02	03/11/21	TM/KB	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	04/02/21	KB	SM4500-Norg B-C
Chloride	mg/L	170	3.0	03/12/21	SD	EPA 300.0
Mercury*	mg/L	BRL	0.0005	03/15/21	RIA*	EPA 245.1
Total Phosphorous (P)	mg/L	0.015	0.005	04/01/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	1.6	0.20	04/02/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.109	0.017	03/11/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	2.9	NA	06/15/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.20	NA	06/15/21	KB	Calculation
Ortho Phosphorous (P)	mg/L	0.011	0.005	03/11/21	TM/KB	SM 4500-P
Particulate Organic Carbon	mg/L	0.178	NA	04/08/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.20	NA	06/15/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	2.9	NA	04/06/21	KB	Calculation

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We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

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Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, June 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*GW Eel River*	***Comments:***
Project Number:	*A17*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-210578*	
Date Received:	*03/11/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
A17 A	12:40	03/11/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

New England ChromaChem
6 Nichols Street
Salem, MA 01970
978-744-6600

MA DEP Lab. M-MA072 RI Lab. LAO00364

Client: Envirotech Laboratory, Inc.
State: Liquid

			Analytical Results									
Lab ID	**Client ID**	**Date Sampled**	**TOC mg/L**									
103338	WW-210576 Total low	03/11/21	0.216									
103339	WW-210576 Dissolved low	03/11/21	0.117									
103340	WW-210577 Total low	03/11/21	0.699									
103341	WW-210577 Dissolved low	03/11/21	0.503									
103342	WW-210578A Total low	03/11/21	0.287									
103343	WW-210578A Dissolved low	03/11/21	0.212									
103344	WW-210578B Dissolved low	03/11/21	0.103									

Analytical Methodology

Analyte	**Method**	**Detection Limit**	**PQL**	**Units**	**Date Analyzed**	**Cert Status**
TOC	Standard Methods 5310C	0.0170	0.0850	mg/L	03/16/21	NA

Form: Mis

Electronically signed and approved by: Brian L. Bornstein Date: 03/17/21

R.I. Analytical Laboratories, Inc.

Laboratory Report

Envirotech Laboratories, Inc.

Work Order #: 2103-04047

Project Name: PLYMOUTH ENV

Sample Number: 001
Sample Description: WW-210576 7S
Sample Type : GRAB
Sample Date / Time : 3/11/2021 @ 13:55

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Metals							
Mercury	<0.00050	0.00050	mg/l	EPA 245.1	3/15/2021	14:52	BB
Mercury Digestion				EPA 245.1	3/15/2021	13:42	RMS

Sample Number: 002
Sample Description: WW-210577 A13
Sample Type : GRAB
Sample Date / Time : 3/11/2021 @ 10:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Metals							
Mercury	<0.00050	0.00050	mg/l	EPA 245.1	3/15/2021	14:56	BB
Mercury Digestion				EPA 245.1	3/15/2021	13:42	RMS

Sample Number: 003
Sample Description: WW-210578 A17
Sample Type : GRAB
Sample Date / Time : 3/11/2021 @ 12:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Metals							
Mercury	<0.00050	0.00050	mg/l	EPA 245.1	3/15/2021	14:59	BB
Mercury Digestion				EPA 245.1	3/15/2021	13:42	RMS

New England Chromachem
6 Nichols Street
Salem, MA 01970
978-744-6600

Sample Information

EPA Method 524.2 Rev 4.1 Volatile Organic Compounds in Water	
Lab ID:	103345
Client:	Envirotech Laboratory, Inc.
Client ID:	WW-210576
State:	Liquid
Date Sampled:	03/11/21
Date Received:	03/16/21
Date Analyzed:	03/16/21

Regulated VOC's	Results (ug/L)	MCL (ug/L)
Benzene	ND	5
Carbon Tetrachloride	ND	5
1,1-Dichloroethene	ND	7
1,2-Dichloroethane	ND	5
1,2-Dichlorobenzene	ND	600
1,4-Dichlorobenzene	ND	5
Trichloroethene	ND	5
1,1,1-Trichloroethane	ND	200
Vinyl Chloride	ND	2
Chlorobenzene	ND	100
cis-1,2-dichloroethene	ND	70
trans-1,2-dichloroethene	ND	100
1,2-Dichloropropane	ND	5
Ethylbenzene	ND	700
Styrene	ND	100
Tetrachloroethene	ND	5
Toluene	ND	1000
Xylenes(Total)	ND	10000
Methylene Chloride	ND	5
1,2,4-Trichlorobenzene	ND	70
1,1,2-Trichloroethane	ND	5

* Acetone Detection Limit = 10 ug/L
ND = < Method Detection Limit
NA = Not Analyzed

Unregulated VOC's	Results (ug/L)
Acetone*	ND
Bromobenzene	ND
Bromochloromethane	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
2-Butanone	ND
N-Butylbenzene	ND
Sec-Butylbenzene	ND
Tert-Butylbenzene	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
2-Chlorotoluene	ND
4-Chlorotoluene	ND
Dibromochloromethane	ND
1,2-Dibromo-3-Chloropropane	ND
1,2-Dibromoethane	ND
Dibromomethane	ND
1,3-Dichlorobenzene	ND
Dichlorodifluoromethane	ND
1,1-Dichloroethane	ND
1,3-Dichloropropane	ND
2,2-Dichloropropane	ND
1,1-Dichloropropene	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Hexachlorobutadiene	ND
Isopropylbenzene	ND
P-Isopropyltoluene	ND
Methyl-tert-butyl ether	ND
Naphthalene	ND
N-Propylbenzene	ND
1,1,1,2-Tetrachloroethane	ND
1,1,2,2-Tetrachloroethane	ND
1,2,3-Trichlorobenzene	ND
Trichlorofluoromethane	ND
1,2,3-Trichloropropane	ND
1,2,4-Trimethylbenzene	ND
1,3,5-Trimethylbenzene	ND

Surrogate Standard Recoveries	%
Benzene-d6	101
4-Bromofluorobenzene	107
1,2-Dichlorobenzene-d4	100

MCL TTHM's = 80 ug/L
Method Detection Limit = 0.5 ug/L
Analysis performed per 310CMR42

Electronically signed and approved by Mr. Bruce A. Bornstein, Lab Director Date: 3/17/2021

New England Chromachem
6 Nichols Street
Salem, MA 01970
978-744-6600

Sample Information

EPA Method 524.2 Rev 4.1 Volatile Organic Compounds in Water	
Lab ID:	103346
Client:	Envirotech Laboratory, Inc.
Client ID:	WW-210577
State:	Liquid
Date Sampled:	03/11/21
Date Received:	03/16/21
Date Analyzed:	03/16/21

Regulated VOC's	Results (ug/L)	MCL (ug/L)
Benzene	ND	5
Carbon Tetrachloride	ND	5
1,1-Dichloroethene	ND	7
1,2-Dichloroethane	ND	5
1,2-Dichlorobenzene	ND	600
1,4-Dichlorobenzene	ND	5
Trichloroethene	ND	5
1,1,1-Trichloroethane	ND	200
Vinyl Chloride	ND	2
Chlorobenzene	ND	100
cis-1,2-dichloroethene	ND	70
trans-1,2-dichloroethene	ND	100
1,2-Dichloropropane	ND	5
Ethylbenzene	ND	700
Styrene	ND	100
Tetrachloroethene	ND	5
Toluene	ND	1000
Xylenes(Total)	ND	10000
Methylene Chloride	ND	5
1,2,4-Trichlorobenzene	ND	70
1,1,2-Trichloroethane	ND	5

* Acetone Detection Limit = 50 ug/L
ND = < Method Detection Limit
NA = Not Analyzed

Note: This sample exhibited excessive foaming and could not be analyzed at a lower detection limit.

Surrogate Standard Recoveries	%
Benzene-d6	99
4-Bromofluorobenzene	95
1,2-Dichlorobenzene-d4	93

Unregulated VOC's	Results (ug/L)
Acetone*	ND
Bromobenzene	ND
Bromochloromethane	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
2-Butanone	ND
N-Butylbenzene	ND
Sec-Butylbenzene	ND
Tert-Butylbenzene	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
2-Chlorotoluene	ND
4-Chlorotoluene	ND
Dibromochloromethane	ND
1,2-Dibromo-3-Chloropropane	ND
1,2-Dibromoethane	ND
Dibromomethane	ND
1,3-Dichlorobenzene	ND
Dichlorodifluoromethane	ND
1,1-Dichloroethane	ND
1,3-Dichloropropane	ND
2,2-Dichloropropane	ND
1,1-Dichloropropene	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Hexachlorobutadiene	ND
Isopropylbenzene	ND
P-Isopropyltoluene	ND
Methyl-tert-butyl ether	ND
Naphthalene	ND
N-Propylbenzene	ND
1,1,1,2-Tetrachloroethane	ND
1,1,2,2-Tetrachloroethane	ND
1,2,3-Trichlorobenzene	ND
Trichlorofluoromethane	ND
1,2,3-Trichloropropane	ND
1,2,4-Trimethylbenzene	ND
1,3,5-Trimethylbenzene	ND

MCL TTHM's = 80 ug/L
Method Detection Limit = 2.5 ug/L
Analysis performed per 310CMR42

Electronically signed and approved by Mr. Bruce A. Bornstein, Lab Director Date: 3/17/2021

New England Chromachem
6 Nichols Street
Salem, MA 01970
978-744-6600

Sample Information

EPA Method 524.2 Rev 4.1 Volatile Organic Compounds in Water	
Lab ID:	103347
Client:	Envirotech Laboratory, Inc.
Client ID:	WW-210578
State:	Liquid
Date Sampled:	03/11/21
Date Received:	03/16/21
Date Analyzed:	03/17/21

Regulated VOC's	Results (ug/L)	MCL (ug/L)
Benzene	ND	5
Carbon Tetrachloride	ND	5
1,1-Dichloroethene	ND	7
1,2-Dichloroethane	ND	5
1,2-Dichlorobenzene	ND	600
1,4-Dichlorobenzene	ND	5
Trichloroethene	ND	5
1,1,1-Trichloroethane	ND	200
Vinyl Chloride	ND	2
Chlorobenzene	ND	100
cis-1,2-dichloroethene	ND	70
trans-1,2-dichloroethene	ND	100
1,2-Dichloropropane	ND	5
Ethylbenzene	ND	700
Styrene	ND	100
Tetrachloroethene	ND	5
Toluene	ND	1000
Xylenes(Total)	ND	10000
Methylene Chloride	ND	5
1,2,4-Trichlorobenzene	ND	70
1,1,2-Trichloroethane	ND	5

* Acetone Detection Limit = 10 ug/L
ND = < Method Detection Limit
NA = Not Analyzed

Unregulated VOC's	Results (ug/L)
Acetone*	ND
Bromobenzene	ND
Bromochloromethane	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
2-Butanone	ND
N-Butylbenzene	ND
Sec-Butylbenzene	ND
Tert-Butylbenzene	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
2-Chlorotoluene	ND
4-Chlorotoluene	ND
Dibromochloromethane	ND
1,2-Dibromo-3-Chloropropane	ND
1,2-Dibromoethane	ND
Dibromomethane	ND
1,3-Dichlorobenzene	ND
Dichlorodifluoromethane	ND
1,1-Dichloroethane	ND
1,3-Dichloropropane	ND
2,2-Dichloropropane	ND
1,1-Dichloropropene	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Hexachlorobutadiene	ND
Isopropylbenzene	ND
P-Isopropyltoluene	ND
Methyl-tert-butyl ether	ND
Naphthalene	ND
N-Propylbenzene	ND
1,1,1,2-Tetrachloroethane	ND
1,1,2,2-Tetrachloroethane	ND
1,2,3-Trichlorobenzene	ND
Trichlorofluoromethane	ND
1,2,3-Trichloropropane	ND
1,2,4-Trimethylbenzene	ND
1,3,5-Trimethylbenzene	ND

Surrogate Standard Recoveries	%
Benzene-d6	99
4-Bromofluorobenzene	106
1,2-Dichlorobenzene-d4	102

MCL TTHM's = 80 ug/L
Method Detection Limit = 0.5 ug/L
Analysis performed per 310CMR42

Electronically signed and approved by Mr. Bruce A. Bornstein, Lab Director Date: 3/17/2021

SCANNED

(1)

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Groundwater Eel River** -Plymouth MA
Sampler: Kim Tower (KT)

WW210376

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
3/11/21	1355	7S	3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Glass	Ortho-phosphate	NONE
			3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Glass	Ortho-phosphate	NONE

NOTE: **Analysis needed for reporting in lowest detection possible**; Total Dissolved Solids,O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time
Kim Tow

Received By: Date/Time:
E Fonseca 3/11/21 14:52

SCANNED

Chain of Custody

2

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Groundwater Eel River** -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
WW-210577 3/11/21	1025	A13	3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Glass	Ortho-phosphate	NONE
WW-210578 3/11/21	1240	A17	3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Glass	Ortho-phosphate	NONE

NOTE: **Analysis needed for reporting in lowest detection possible;** Total Dissolved Solids,O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By:	Date/Time	Received By:	Date/Time:
Kim Tower		E. Fonseca	3/11/21 14:57

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, June 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*GW Eel River*	***Comments:***
Project Number:	*2D*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-210596*	
Date Received:	*03/15/21*	

Sample Type 2D A	***Sample Time*** 13:40	***Sample Date*** 03/15/21	***Comments***			
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	0.29	NA	06/29/21	KB	Calculation
Total Dissolved Solids	mg/L	97	6.0	03/18/21	AMB	SM 2540 C
Chloride grab	mg/L	41	3.0	03/15/21	LL	EPA 300.0
Total Organic Carbon*	mg/L	1.18	0.017	03/15/21	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND	*	03/18/21	NEC*	*
Total Iron	mg/L	1.57	0.01	03/18/21	KB	EPA 200.7
Boron	mg/L	0.011	0.010	03/18/21	KB	EPA 200.7
Copper	mg/L	BRL	0.003	03/18/21	KB	EPA 200.7
Nitrate-N	mg/L	0.02	0.01	03/15/21	LL	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	03/15/21	LL	EPA 300.0
Ammonia-N *	mg/L	0.163	0.02	03/19/21	TM/KB	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.27	0.2	04/02/21	KB	SM4500-Norg B-C
Mercury*	mg/L	BRL	0.0005	03/19/21	RIA*	EPA 245.1
Total Phosphorous (P)	mg/L	0.056	0.005	04/01/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.23	0.20	04/02/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.991	0.017	03/15/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.18	NA	04/06/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.07	NA	04/06/21	KB	Calculation
Ortho Phosphorous (P)	mg/L	0.026	0.005	03/17/21	TM/KB	SM 4500-P
Particulate Organic Carbon	mg/L	0.189	NA	03/15/21	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.04	NA	06/26/21	TM/KB	Calculation
Total Dissolved Nitrogen	mg/L	0.25	NA	04/06/21	KB	Calculation

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari
Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, June 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*GW Eel River*	***Comments:***
Project Number:	*2D*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-210596*	
Date Received:	*03/15/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
2D A	13:40	03/15/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari
Ronald J. Saari
Laboratory Director

New England ChromaChem
6 Nichols Street
Salem, MA 01970
978-744-6600

MA DEP Lab. M-MA072 RI Lab. LAO00364

Sample Information

EPA Method 624.1 Volatile Organic Compounds	
Lab ID:	103389
Client:	Envirotech Laboratory, Inc.
Client ID:	WW-210596
State:	Liquid
Date Sampled:	03/15/21
Date Received:	03/18/21
Date Analyzed:	03/18/21

Analytical Results

Parameter	Results (ug/L)	Parameter	Results (ug/L)
Acetone*	ND	1,1-Dichloroethene	ND
Acrolein	ND	cis-1,2-dichloroethene	ND
Acrylonitrile	ND	trans-1,2-dichloroethene	ND
Benzene	ND	1,2-Dichloropropane	ND
Bromodichloromethane	ND	cis-1,3-dichloropropene	ND
Bromoform	ND	trans-1,3-dichloropropene	ND
Bromomethane	ND	Ethylbenzene	ND
2-Butanone	ND	2-Hexanone	ND
Carbon Disulfide	ND	Methylene Chloride	ND
Carbon Tetrachloride	ND	4-Methyl-2-pentanone	ND
Chlorobenzene	ND	Methyl-tert-butyl ether	ND
Chloroethane	ND	Styrene	ND
2-Chloroethylvinyl Ether	ND	1,1,2,2-Tetrachloroethane	ND
Chloroform	ND	Tetrachloroethene	ND
Chloromethane	ND	Toluene	ND
Dibromochloromethane	ND	1,1,1-Trichloroethane	ND
Dibromomethane	ND	1,1,2-Trichloroethane	ND
1,2-Dichlorobenzene	ND	Trichloroethene	ND
1,3-Dichlorobenzene	ND	Trichlorofluoromethane	ND
1,4-Dichlorobenzene	ND	Vinyl Chloride	ND
1,1-Dichloroethane	ND	Vinyl Acetate	ND
1,2-Dichloroethane	ND	Total Xylenes	ND

Surrogate Standard Recoveries

Benzene-d6	101
4-Bromofluorobenzene	103
1,2-Dichlorobenzene-d4	104

ND = < Method Detection Limit
NA = Not Analyzed

Method Detection Limit = 1 ug/L

*Acetone Method Detection Limit = 10 ug/L

Analysis performed per 310CMR42
MA DEP Lab. M-MA072 RI Lab. LAO00364

Electronically signed and approved by: Mr. Bruce A. Bornstein, Lab Director — 03/19/21 Date

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, June 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*GW Eel River*	***Comments:***
Project Number:	*A15*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-210597*	
Date Received:	*03/15/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
A15 A	12:30	03/15/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	0.89	NA	04/06/21	KB	Calculation
Total Dissolved Solids	mg/L	44	6.0	03/18/21	AMB	SM 2540 C
Total Organic Carbon*	mg/L	0.559	0.017	03/15/21	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND	*	03/18/21	NEC*	*
Total Iron	mg/L	BRL	0.01	03/18/21	KB	EPA 200.7
Boron	mg/L	BRL	0.010	03/18/21	KB	EPA 200.7
Copper	mg/L	BRL	0.003	03/18/21	KB	EPA 200.7
Nitrate-N	mg/L	0.89	0.01	03/15/21	LL	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	03/15/21	LL	EPA 300.0
Ammonia-N *	mg/L	BRL	0.02	03/19/21	TM/KB	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	04/02/21	KB	SM4500-Norg B-C
Chloride	mg/L	18	3.0	03/15/21	LL	EPA 300.0
Mercury*	mg/L	BRL	0.0005	03/19/21	RIA*	EPA 245.1
Total Phosphorous (P)	mg/L	BRL	0.005	04/01/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	04/02/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.418	0.017	03/15/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.89	NA	04/06/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.20	NA	04/06/21	KB	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	03/17/21	TM/KB	SM 4500-P
Particulate Organic Carbon	mg/L	0.141	NA	03/15/21	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.20	NA	04/06/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.89	NA	04/06/21	KB	Calculation

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, June 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*GW Eel River*	***Comments:***
Project Number:	*A15*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-210597*	
Date Received:	*03/15/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
A15 A	12:30	03/15/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari

Ronald J. Saari
Laboratory Director

New England ChromaChem
6 Nichols Street
Salem, MA 01970
978-744-6600

MA DEP Lab. M-MA072 RI Lab. LAO00364

Sample Information

EPA Method 624.1 Volatile Organic Compounds	
Lab ID:	103390
Client:	Envirotech Laboratory, Inc.
Client ID:	WW-210597
State:	Liquid
Date Sampled:	03/15/21
Date Received:	03/18/21
Date Analyzed:	03/18/21

Analytical Results

Parameter	Results (ug/L)	Parameter	Results (ug/L)
Acetone*	ND	1,1-Dichloroethene	ND
Acrolein	ND	cis-1,2-dichloroethene	ND
Acrylonitrile	ND	trans-1,2-dichloroethene	ND
Benzene	ND	1,2-Dichloropropane	ND
Bromodichloromethane	ND	cis-1,3-dichloropropene	ND
Bromoform	ND	trans-1,3-dichloropropene	ND
Bromomethane	ND	Ethylbenzene	ND
2-Butanone	ND	2-Hexanone	ND
Carbon Disulfide	ND	Methylene Chloride	ND
Carbon Tetrachloride	ND	4-Methyl-2-pentanone	ND
Chlorobenzene	ND	Methyl-tert-butyl ether	ND
Chloroethane	ND	Styrene	ND
2-Chloroethylvinyl Ether	ND	1,1,2,2-Tetrachloroethane	ND
Chloroform	ND	Tetrachloroethene	ND
Chloromethane	ND	Toluene	ND
Dibromochloromethane	ND	1,1,1-Trichloroethane	ND
Dibromomethane	ND	1,1,2-Trichloroethane	ND
1,2-Dichlorobenzene	ND	Trichloroethene	ND
1,3-Dichlorobenzene	ND	Trichlorofluoromethane	ND
1,4-Dichlorobenzene	ND	Vinyl Chloride	ND
1,1-Dichloroethane	ND	Vinyl Acetate	ND
1,2-Dichloroethane	ND	Total Xylenes	ND

Surrogate Standard Recoveries

Benzene-d6	98
4-Bromofluorobenzene	105
1,2-Dichlorobenzene-d4	103

ND = < Method Detection Limit
NA = Not Analyzed

Method Detection Limit = 1 ug/L

*Acetone Method Detection Limit = 10 ug/L

Analysis performed per 310CMR42
MA DEP Lab. M-MA072 RI Lab. LAO00364

Electronically signed and approved by: Mr. Bruce A. Bornstein, Lab Director — 03/19/21 Date

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, June 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*GW Eel River*	***Comments:***
Project Number:	*2S*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-210598*	
Date Received:	*03/15/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
2S A	13:10	03/15/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	1.8	NA	04/06/21	KB	Calculation
Total Dissolved Solids	mg/L	179	6.0	03/18/21	AMB	SM 2540 C
Total Organic Carbon*	mg/L	0.075	0.017	03/15/21	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND	*	03/18/21	NEC*	*
Total Iron	mg/L	0.04	0.01	03/18/21	KB	EPA 200.7
Boron	mg/L	0.019	0.010	03/18/21	KB	EPA 200.7
Copper	mg/L	BRL	0.003	03/18/21	KB	EPA 200.7
Nitrate-N	mg/L	1.80	0.01	03/15/21	LL	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	03/15/21	LL	EPA 300.0
Ammonia-N *	mg/L	BRL	0.02	03/19/21	TM/KB	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	04/02/21	KB	SM4500-Norg B-C
Chloride	mg/L	73	3.0	03/15/21	LL	EPA 300.0
Mercury*	mg/L	BRL	0.0005	03/19/21	RIA*	EPA 245.1
Total Phosphorous (P)	mg/L	0.040	0.005	04/01/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	04/02/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.032	0.017	03/15/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	1.8	NA	04/06/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.20	NA	04/06/21	KB	Calculation
Ortho Phosphorous (P)	mg/L	0.036	0.005	03/17/21	TM/KB	SM 4500-P
Particulate Organic Carbon	mg/L	0.043	NA	03/15/21	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.20	NA	04/06/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	1.8	NA	04/06/21	KB	Calculation

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari
Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, June 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*GW Eel River*	***Comments:***
Project Number:	*2S*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-210598*	
Date Received:	*03/15/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
2S A	13:10	03/15/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari

Ronald J. Saari
Laboratory Director

New England ChromaChem
6 Nichols Street
Salem, MA 01970
978-744-6600

MA DEP Lab. M-MA072 RI Lab. LAO00364

Sample Information

EPA Method 624.1 Volatile Organic Compounds	
Lab ID:	103391
Client:	Envirotech Laboratory, Inc.
Client ID:	WW-210598
State:	Liquid
Date Sampled:	03/15/21
Date Received:	03/18/21
Date Analyzed:	03/18/21

Analytical Results

Parameter	Results (ug/L)	Parameter	Results (ug/L)
Acetone*	ND	1,1-Dichloroethene	ND
Acrolein	ND	cis-1,2-dichloroethene	ND
Acrylonitrile	ND	trans-1,2-dichloroethene	ND
Benzene	ND	1,2-Dichloropropane	ND
Bromodichloromethane	ND	cis-1,3-dichloropropene	ND
Bromoform	ND	trans-1,3-dichloropropene	ND
Bromomethane	ND	Ethylbenzene	ND
2-Butanone	ND	2-Hexanone	ND
Carbon Disulfide	ND	Methylene Chloride	ND
Carbon Tetrachloride	ND	4-Methyl-2-pentanone	ND
Chlorobenzene	ND	Methyl-tert-butyl ether	ND
Chloroethane	ND	Styrene	ND
2-Chloroethylvinyl Ether	ND	1,1,2,2-Tetrachloroethane	ND
Chloroform	ND	Tetrachloroethene	ND
Chloromethane	ND	Toluene	ND
Dibromochloromethane	ND	1,1,1-Trichloroethane	ND
Dibromomethane	ND	1,1,2-Trichloroethane	ND
1,2-Dichlorobenzene	ND	Trichloroethene	ND
1,3-Dichlorobenzene	ND	Trichlorofluoromethane	ND
1,4-Dichlorobenzene	ND	Vinyl Chloride	ND
1,1-Dichloroethane	ND	Vinyl Acetate	ND
1,2-Dichloroethane	ND	Total Xylenes	ND

Surrogate Standard Recoveries

Benzene-d6	99
4-Bromofluorobenzene	100
1,2-Dichlorobenzene-d4	101

ND = < Method Detection Limit
NA = Not Analyzed

Method Detection Limit = 1 ug/L

*Acetone Method Detection Limit = 10 ug/L

Analysis performed per 310CMR42
MA DEP Lab. M-MA072 RI Lab. LAO00364

Electronically signed and approved by: Mr. Bruce A. Bornstein, Lab Director — 03/19/21 Date

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, June 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *GW Eel River*
Project Number: *DW-1*
Sampled By: *Kim Tower*
Lab Order Number: *WW-210599*
Date Received: *03/15/21*

Comments:

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
DW-1 A	09:00	03/15/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	1.3	NA	04/06/21	KB	Calculation
Total Dissolved Solids	mg/L	119	6.0	03/18/21	AMB	SM 2540 C
Total Organic Carbon*	mg/L	0.384	0.017	03/15/21	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	1.11	*	03/18/21	NEC*	*
Total Iron	mg/L	0.02	0.01	03/18/21	KB	EPA 200.7
Boron	mg/L	0.017	0.010	03/18/21	KB	EPA 200.7
Copper	mg/L	BRL	0.003	03/18/21	KB	EPA 200.7
Nitrate-N	mg/L	1.30	0.01	03/15/21	LL	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	03/15/21	LL	EPA 300.0
Ammonia-N *	mg/L	BRL	0.02	03/19/21	TM/KB	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	04/02/21	KB	SM4500-Norg B-C
Chloride	mg/L	51	3.0	03/15/21	LL	EPA 300.0
Mercury*	mg/L	BRL	0.0005	03/19/21	RIA*	EPA 245.1
Total Phosphorous (P)	mg/L	0.012	0.005	04/01/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	04/02/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.293	0.017	03/15/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	1.3	NA	04/06/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.20	NA	04/06/21	KB	Calculation
Ortho Phosphorous (P)	mg/L	0.010	0.005	03/17/21	TM/KB	SM 4500-P
Particulate Organic Carbon	mg/L	0.091	NA	03/15/21	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.20	NA	04/06/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	1.3	NA	04/06/21	KB	Calculation

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, June 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*GW Eel River*	***Comments:***
Project Number:	*DW-1*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-210599*	
Date Received:	*03/15/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
DW-1 A	09:00	03/15/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

*Trace to low levels of chloroform are occasionally detected in ground water in coastline areas.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari

Ronald J. Saari
Laboratory Director

New England ChromaChem
6 Nichols Street
Salem, MA 01970
978-744-6600

MA DEP Lab. M-MA072 RI Lab. LAO00364

Sample Information

EPA Method 624.1 Volatile Organic Compounds	
Lab ID:	103392
Client:	Envirotech Laboratory, Inc.
Client ID:	WW-210599
State:	Liquid
Date Sampled:	03/15/21
Date Received:	03/18/21
Date Analyzed:	03/18/21

Analytical Results

Parameter	Results (ug/L)	Parameter	Results (ug/L)
Acetone*	ND	1,1-Dichloroethene	ND
Acrolein	ND	cis-1,2-dichloroethene	ND
Acrylonitrile	ND	trans-1,2-dichloroethene	ND
Benzene	ND	1,2-Dichloropropane	ND
Bromodichloromethane	ND	cis-1,3-dichloropropene	ND
Bromoform	ND	trans-1,3-dichloropropene	ND
Bromomethane	ND	Ethylbenzene	ND
2-Butanone	ND	2-Hexanone	ND
Carbon Disulfide	ND	Methylene Chloride	ND
Carbon Tetrachloride	ND	4-Methyl-2-pentanone	ND
Chlorobenzene	ND	Methyl-tert-butyl ether	ND
Chloroethane	ND	Styrene	ND
2-Chloroethylvinyl Ether	ND	1,1,2,2-Tetrachloroethane	ND
Chloroform	1.11	Tetrachloroethene	ND
Chloromethane	ND	Toluene	ND
Dibromochloromethane	ND	1,1,1-Trichloroethane	ND
Dibromomethane	ND	1,1,2-Trichloroethane	ND
1,2-Dichlorobenzene	ND	Trichloroethene	ND
1,3-Dichlorobenzene	ND	Trichlorofluoromethane	ND
1,4-Dichlorobenzene	ND	Vinyl Chloride	ND
1,1-Dichloroethane	ND	Vinyl Acetate	ND
1,2-Dichloroethane	ND	Total Xylenes	ND

Surrogate Standard Recoveries

Benzene-d6	98
4-Bromofluorobenzene	104
1,2-Dichlorobenzene-d4	104

ND = < Method Detection Limit
NA = Not Analyzed

Method Detection Limit = 1 ug/L

*Acetone Method Detection Limit = 10 ug/L

Analysis performed per 310CMR42
MA DEP Lab. M-MA072 RI Lab. LAO00364

Electronically signed and approved by: Mr. Bruce A. Bornstein, Lab Director — 03/19/21 Date

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, June 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *GW Eel River*
Project Number: *A19*
Sampled By: *Kim Tower*
Lab Order Number: *WW-210600*
Date Received: *03/15/21*

Comments:

Sample Type A19 A	***Sample Time*** 09:45	***Sample Date*** 03/15/21	***Comments***			
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	1.7	NA	04/06/21	KB	Calculation
Total Dissolved Solids	mg/L	128	6.0	03/18/21	AMB	SM 2540 C
Total Organic Carbon*	mg/L	0.408	0.017	03/15/21	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	1.09	*	03/18/21	NEC*	*
Total Iron	mg/L	0.02	0.01	03/18/21	KB	EPA 200.7
Boron	mg/L	0.017	0.010	03/18/21	KB	EPA 200.7
Copper	mg/L	BRL	0.003	03/18/21	KB	EPA 200.7
Nitrate-N	mg/L	1.30	0.01	03/15/21	LL	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	03/15/21	LL	EPA 300.0
Ammonia-N *	mg/L	BRL	0.02	03/19/21	TM/KB	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.36	0.2	04/10/21	KB	SM4500-Norg B-C
Chloride	mg/L	51	3.0	03/15/21	LL	EPA 300.0
Mercury*	mg/L	BRL	0.0005	03/19/21	RIA*	EPA 245.1
Total Phosphorous (P)	mg/L	0.017	0.005	04/01/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.27	0.20	04/10/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.330	0.017	03/15/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	1.3	NA	04/06/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.27	NA	04/06/21	KB	Calculation
Particulate Organic Carbon	mg/L	0.078	NA	03/15/21	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.09	NA	06/26/21	TM/KB	Calculation
Total Dissolved Nitrogen	mg/L	1.6	NA	04/17/21	KB	Calculation
Ortho Phosphorous (P)	mg/L	0.011	0.005	03/17/21	TM/KB	10-115-01-1-A

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, June 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*GW Eel River*	***Comments:***
Project Number:	*A19*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-210600*	
Date Received:	*03/15/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
A19 A	09:45	03/15/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

*Trace to low levels of chloroform are occasionally detected in ground water in coastline areas.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

New England ChromaChem
6 Nichols Street
Salem, MA 01970
978-744-6600

MA DEP Lab. M-MA072 RI Lab. LAO00364

Sample Information

EPA Method 624.1 Volatile Organic Compounds	
Lab ID:	103393
Client:	Envirotech Laboratory, Inc.
Client ID:	WW-210600
State:	Liquid
Date Sampled:	03/15/21
Date Received:	03/18/21
Date Analyzed:	03/18/21

Analytical Results

Parameter	Results (ug/L)	Parameter	Results (ug/L)
Acetone*	ND	1,1-Dichloroethene	ND
Acrolein	ND	cis-1,2-dichloroethene	ND
Acrylonitrile	ND	trans-1,2-dichloroethene	ND
Benzene	ND	1,2-Dichloropropane	ND
Bromodichloromethane	ND	cis-1,3-dichloropropene	ND
Bromoform	ND	trans-1,3-dichloropropene	ND
Bromomethane	ND	Ethylbenzene	ND
2-Butanone	ND	2-Hexanone	ND
Carbon Disulfide	ND	Methylene Chloride	ND
Carbon Tetrachloride	ND	4-Methyl-2-pentanone	ND
Chlorobenzene	ND	Methyl-tert-butyl ether	ND
Chloroethane	ND	Styrene	ND
2-Chloroethylvinyl Ether	ND	1,1,2,2-Tetrachloroethane	ND
Chloroform	1.09	Tetrachloroethene	ND
Chloromethane	ND	Toluene	ND
Dibromochloromethane	ND	1,1,1-Trichloroethane	ND
Dibromomethane	ND	1,1,2-Trichloroethane	ND
1,2-Dichlorobenzene	ND	Trichloroethene	ND
1,3-Dichlorobenzene	ND	Trichlorofluoromethane	ND
1,4-Dichlorobenzene	ND	Vinyl Chloride	ND
1,1-Dichloroethane	ND	Vinyl Acetate	ND
1,2-Dichloroethane	ND	Total Xylenes	ND

Surrogate Standard Recoveries

Benzene-d6	97
4-Bromofluorobenzene	102
1,2-Dichlorobenzene-d4	100

ND = < Method Detection Limit
NA = Not Analyzed

Method Detection Limit = 1 ug/L

*Acetone Method Detection Limit = 10 ug/L

Analysis performed per 310CMR42
MA DEP Lab. M-MA072 RI Lab. LAO00364

Electronically signed and approved by: Mr. Bruce A. Bornstein, Lab Director — 03/19/21 Date

SCANNED

L

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Groundwater Eel River** -Plymouth MA
Sampler: Kim Tower (KT)

JW-210596

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
3-15-21	1340	2D	3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Glass	Ortho-phosphate	NONE
			3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Glass	Ortho-phosphate	NONE

NOTE: **Analysis needed for reporting in lowest detection possible**; Total Dissolved Solids,O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Received By: Date/Time: 3/15/21 14:15 pm

SCANNED

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Groundwater Eel River** -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
3-15-21	1230	A15	3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Glass	Ortho-phosphate	NONE
3-15-21	1310	2S	3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Glass	Ortho-phosphate	NONE

WW-210597

WW-210598

NOTE: **Analysis needed for reporting in lowest detection possible**; Total Dissolved Solids,O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time
Kim Tower

Received By: Date/Time:
Emsea 3/15/21 14:15 pm

SCANNED

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Groundwater Eel River** -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
3-15-21	0900	DW-1	3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Glass	Ortho-phosphate	NONE
3-15-21	0945	A19	3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Glass	Ortho-phosphate	NONE

NW-210599

NW210600

NOTE: **Analysis needed for reporting in lowest detection possible**; Total Dissolved Solids,O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time
Kim Tow

Received By: Date/Time:
E Fonseca 3/15/21 14:15PM

New England ChromaChem
6 Nichols Street
Salem, MA 01970
978-744-6600

MA DEP Lab. M-MA072 RI Lab. LAO00364

Client: Envirotech Laboratory, Inc.
State: Liquid

			Analytical Results									
Lab ID	**Client ID**	**Date Sampled**	**TOC mg/L**									
103394	WW-210596 Total low	03/15/21	1.18									
103395	WW-210596 Dissolved low	03/15/21	0.991									
103396	WW-210597 Total low	03/15/21	0.559									
103397	WW-210597 Dissolved low	03/15/21	0.418									
103398	WW-210598 Total low	03/15/21	0.075									
103399	WW-210598 Dissolved low	03/15/21	0.032									
103400	WW-210599 Total low	03/15/21	0.384									
103401	WW-210599 Dissolved low	03/15/21	0.293									
103402	WW-210600A Total low	03/15/21	0.408									
103403	WW-210600A Dissolved low	03/15/21	0.330									
103404	WW-210600B Dissolved low	03/15/21	ND									

Analytical Methodology

Analyte	**Method**	**Detection Limit**	**PQL**	**Units**	**Date Analyzed**	**Cert Status**
TOC	Standard Methods 5310C	0.0170	0.0850	mg/L	03/18/21	N

Form: Mis

Electronically signed and approved by: Bruce L. Bornstein Date: 03/19/21

R.I. Analytical Laboratories, Inc.

Laboratory Report

Envirotech Laboratories, Inc.

Work Order #: 2103-04162

Project Name: PLYMOUTH ENV.

Sample Number: 001
Sample Description: WW-210596 2D
Sample Type : GRAB
Sample Date / Time : 3/15/2021 @ 13:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Metals							
Mercury	<0.00050	0.00050	mg/l	EPA 245.1	3/19/2021	11:08	BB
Mercury Digestion				EPA 245.1	3/19/2021	10:17	BB

Sample Number: 002
Sample Description: WW-210597 A15
Sample Type : GRAB
Sample Date / Time : 3/15/2021 @ 12:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Metals							
Mercury	<0.00050	0.00050	mg/l	EPA 245.1	3/19/2021	11:13	BB
Mercury Digestion				EPA 245.1	3/19/2021	10:17	BB

Sample Number: 003
Sample Description: WW-210598 2S
Sample Type : GRAB
Sample Date / Time : 3/15/2021 @ 13:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Metals							
Mercury	<0.00050	0.00050	mg/l	EPA 245.1	3/19/2021	11:16	BB
Mercury Digestion				EPA 245.1	3/19/2021	10:17	BB

R.I. Analytical Laboratories, Inc.

Laboratory Report

Envirotech Laboratories, Inc.

Work Order #: 2103-04162

Project Name: PLYMOUTH ENV.

Sample Number: 004
Sample Description: WW-210599 DW-1
Sample Type : GRAB
Sample Date / Time : 3/15/2021 @ 09:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Metals							
Mercury	<0.00050	0.00050	mg/l	EPA 245.1	3/19/2021	11:18	BB
Mercury Digestion				EPA 245.1	3/19/2021	10:17	BB

Sample Number: 005
Sample Description: WW-210600 A19
Sample Type : GRAB
Sample Date / Time : 3/15/2021 @ 09:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Metals							
Mercury	<0.00050	0.00050	mg/l	EPA 245.1	3/19/2021	11:19	BB
Mercury Digestion				EPA 245.1	3/19/2021	10:17	BB

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 3/16/2021
Date Reported: 3/22/2021
P.O. Number WW-210596-210600

Work Order #: 2103-04162

Project Name: PLYMOUTH ENV.

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

CHAIN OF CUSTODY FORM

ENVIROTECH LABS, INC.
8 Jan Sebastian Dr., Unit 12
Sandwich, MA 02563
(508)888-6460
1-800-339-6460
FAX (508)888-6446

RI Analytical
M RI 015
Address 41 Illinois Avenue
Warwick, RI 02888
Phone# 401-737-8500
Fax# 401-738-1970

PWS: | Project Name: Plymouth Env.

Sampler: KT

Lab ID #	Date	Time	Comp	Grab	Station location	Container	Pres.	Sample type	Analysis requested
WW-210596	03/15/21	1340		X	2D	plastic	H_2SO_4	Surface water	Mercury
WW-210597	03/15/21	1230		X	A15	plastic	H_2SO_4	Surface water	Mercury
WW-210598	03/15/21	1310		X	2S	plastic	H_2SO_4	Surface water	Mercury
WW-210599	03/15/21	0900		X	DW-1	plastic	H_2SO_4	Surface water	Mercury
WW-210600	03/15/21	0945		X	A19	plastic	H_2SO_4	Surface water	Mercury

5

2103-04162

Relinquished: [signature] Date/Time 03/16/21 1140 Received: MER

Relinquished: MER Date/Time 3/16/21 1540 Received: [signature]

MER 3.0°C

Contact lab with any exceeded MCL.

Page 1 of 1

bruce@chromachem.com

CHAIN OF CUSTODY FORM

PWS:	Project Name: Plymouth ENV.
Sampler:	KT

ENVIROTECH LABS, INC.
8 Jan Sebastian Dr., Unit 12
Sandwich, MA 02563
(508)888-6460
1-800-339-6460 -
FAX (508)888-6446

NE Chromachem
Address 6 Nichols Street
Salem, MA 01970
Phone# 978-744-6600
Fax# 206-984-2474

Lab ID #	Date	Time	Com	Grab	Station location	DEP ID	Container	Pres.	Sample type	Analysis requested
WW-210596	03/15/21	1340		X	2D		3VOA	HCl	SW	EPA 624
WW-210597	03/15/21	1230		X	A15		3VOA	HCl	SW	EPA 624
WW-210598	03/15/21	1310		X	2S		3VOA	HCl	SW	EPA 624
WW-210599	03/15/21	0900		X	DW-1		3VOA	HCl	SW	EPA 624
WW-210600	03/15/21	0945		X	A19		3VOA	HCl	SW	EPA 624

Relinquished:	Date/Time 3/17/21 1700	Received:
Relinquished:	Date/Time	Received:

CHAIN OF CUSTODY FORM

PWS:	Project Name: Plymouth ENV.
Sampler:	KT

ENVIROTECH LABS, INC.
8 Jan Sebastian Dr., Unit 12
Sandwich, MA 02563
(508)888-6460
1-800-339-6460 ·
FAX (508)888-6446

NE Chromachem
Address 6 Nichols Street
Salem, MA 01970
Phone# 978-744-6600
Fax# ~~206 984 2474~~

Lab ID #	Date	Time	Com	Grab	Station location	DEP ID	Container	Pres.	Sample type	Analysis requested	
WW-210596	03/15/21	1340		X	2D		3VOA	HCl	SW	EPA 624	103389
WW-210597	03/15/21	1230		X	A15		3VOA	HCl	SW	EPA 624	103390
WW-210598	03/15/21	1310		X	2S		3VOA	HCl	SW	EPA 624	103391
WW-210599	03/15/21	0900		X	DW-1		3VOA	HCl	SW	EPA 624	103392
WW-210600	03/15/21	0945		X	A19		3VOA	HCl	SW	EPA 624	103393

Relinquished:	Date/Time 03/17/21 1700	Received: UPS
Relinquished: UPS	Date/Time 3/18/21 11:00	Received: AP

bruce@chromachem.com

CHAIN OF CUSTODY FORM

PWS:	Project Name: Plymouth Env.
Sampler:	KT

ENVIROTECH LABS, INC.
8 Jan Sebastian Dr., Unit 12
Sandwich, MA 02563
(508)888-6460
1-800-339-6460
FAX (508)888-6446

NE Chromachem
Address 6 Nichols St
Salem, MA 01970
Phone# 1-978-744-6600
Fax# ~~206 984 2474~~

Lab ID #	Date	Time	Comp	Grab	Station location	Container	Pres.	Sample type	Analysis requested
WW-210596	03/15/21	1340		X	2D	2VOA	H_2SO_4		TOC total low detection
						2VOA	H_2SO_4		TOC dissolved
WW-210597	03/15/21	1230		X	A15	2VOA	H_2SO_4		TOC total low detection
						2VOA	H_2SO_4		TOC dissolved
WW-210598	03/15/21	1310		X	2S	2VOA	H_2SO_4		TOC total low detection
						2VOA	H_2SO_4		TOC dissolved
WW-210599	03/15/21	0900		X	DW-1	2VOA	H_2SO_4		TOC total low detection
						2VOA	H_2SO_4		TOC dissolved
WW-210600A	03/15/21	0945		X	A19	2VOA	H_2SO_4		TOC total low detection
						2VOA	H_2SO_4		TOC dissolved
WW-210600B	03/15/21	1600			Blank				TOC dissolved

Total TOC low level 0.5 mg/L
dissolved TOC low level 0.5 mg/L

Relinquished:	Date/Time 03/17/21 1700	Received:	TOC dissolved samples are filtered
Relinquished:	Date/Time	Received:	Contact lab with any exceeded MCL

CHAIN OF CUSTODY FORM

PWS:	Project Name: Plymouth Env.
Sampler:	KT

ENVIROTECH LABS, INC.
8 Jan Sebastian Dr., Unit 12
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(508)888-6460
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NE Chromachem
Address 6 Nichols St
Salem, MA 01970
Phone# 1-978-744-6600
Fax# 206 984 2474

Lab ID #	Date	Time	Comp	Grab	Station location	Container	Pres.	Sample type	Analysis requested	
WW-210596	03/15/21	1340		X	2D	2VOA	H_2SO_4		TOC total low detection	103394
						2VOA	H_2SO_4		TOC dissolved	103395
WW-210597	03/15/21	1230		X	A15	2VOA	H_2SO_4		TOC total low detection	103396
						2VOA	H_2SO_4		TOC dissolved	103397
WW-210598	03/15/21	1310		X	2S	2VOA	H_2SO_4		TOC total low detection	103398
						2VOA	H_2SO_4		TOC dissolved	103399
WW-210599	03/15/21	0900		X	DW-1	2VOA	H_2SO_4		TOC total low detection	103400
						2VOA	H_2SO_4		TOC dissolved	103401
WW-210600A	03/15/21	0945		X	A19	2VOA	H_2SO_4		TOC total low detection	103402
						2VOA	H_2SO_4		TOC dissolved	103403
WW-210600B	03/15/21	1600			Blank				TOC dissolved	103404

Total TOC low level 0.5 mg/L
dissolved TOC low level 0.5 mg/L

Relinquished:	Date/Time 03/17/21 1700	Received: UPS	TOC dissolved samples are filtered Contact lab with any exceeded MCL
Relinquished: UPS	Date/Time 3/18/21 11:00	Received: AP	Page 2 of 2

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, January 12, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-210834*	
Date Received:	*04/08/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
GW-14 A	08:00	04/08/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.10	0.01	04/09/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	04/09/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.41	NA	04/17/21	KB	Calculation
Total Dissolved Solids	mg/L	50	6.0	04/13/21	AMB	SM 2540 C
Total Organic Carbon*	mg/L	0.615	0.017	04/08/21	NEC*	SM 5310 C
Volatile Organic Compounds*	ug/L	None Detected	*	04/13/21	NEC*	*
Total Iron	mg/L	3.77	0.01	05/03/21	KB	EPA 200.7
Boron	mg/L	BRL	0.010	05/03/21	KB	EPA 200.7
Copper	mg/L	0.020	0.003	05/03/21	KB	EPA 200.7
Chloride	mg/L	13	3.0	04/09/21	SD	EPA 300.0
Kjeldhal Nitrogen	mg/L	0.31	0.10	04/10/21	KB	SM4500 Norg B-C
Mercury*	mg/L	<0.00050	0.0005	04/16/21	RIA*	EPA 245.1
Total Phosphorous (P)	mg/L	0.023	0.005	04/15/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.27	0.20	04/10/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.345	0.017	04/08/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.15	NA	08/01/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.22	NA	08/01/21	KB	Calculation
Particulate Organic Carbon	mg/L	0.27	NA	01/12/22	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.04	NA	06/29/21	TM/KB	Calculation
Total Dissolved Nitrogen	mg/L	0.37	NA	04/17/21	KB	Calculation
Ammonia-N	mg/L	0.05	0.02	04/09/21	TM/KB	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	BRL	0.005	04/11/21	TM/KB	10-115-01-1-A

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, January 12, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-210834*	
Date Received:	*04/08/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
GW-14 A	08:00	04/08/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

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****see attached***

By: Ronald Saari

Ronald J. Saari
Laboratory Director

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MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, January 12, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Groundwater Eel River* ***Comments:***
Project Number:
Sampled By: *Kim Tower*
Lab Order Number: *WW-210835*
Date Received: *04/08/21*

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
Bradford A	08:30	04/08/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.09	0.01	04/09/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	04/09/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.42	NA	04/17/21	KB	Calculation
Total Dissolved Solids	mg/L	51	6.0	04/13/21	AMB	SM 2540 C
Total Organic Carbon*	mg/L	0.641	0.017	04/08/21	NEC*	SM 5310 C
Volatile Organic Compounds*	ug/L	None Detected	*	04/13/21	NEC*	*
Total Iron	mg/L	3.66	0.01	05/03/21	KB	EPA 200.7
Boron	mg/L	BRL	0.010	05/03/21	KB	EPA 200.7
Copper	mg/L	0.010	0.003	05/03/21	KB	EPA 200.7
Chloride	mg/L	13	3.0	04/09/21	SD	EPA 300.0
Kjeldhal Nitrogen	mg/L	0.33	0.10	04/10/21	KB	SM4500 Norg B-C
Mercury*	mg/L	<0.00050	0.0005	04/16/21	RIA*	EPA 245.1
Total Phosphorous (P)	mg/L	0.027	0.005	04/15/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.30	0.20	04/10/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.414	0.017	04/08/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.13	NA	08/01/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.26	NA	08/01/21	KB	Calculation
Particulate Organic Carbon	mg/L	0.227	NA	01/12/22	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.03	NA	06/29/21	TM/KB	Calculation
Total Dissolved Nitrogen	mg/L	0.39	NA	04/17/21	KB	Calculation
Ammonia-N	mg/L	0.04	0.02	04/09/21	TM/KB	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	BRL	0.005	04/11/21	TM/KB	10-115-01-1-A

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari
Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, January 12, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-210835*	
Date Received:	*04/08/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
Bradford A	08:30	04/08/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari

Ronald J. Saari
Laboratory Director

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 4/13/2021
Date Reported: 4/16/2021
P.O. Number WW-210834. 210835

Work Order #: 2104-05686

Project Name: PLYMOUTH ENV.

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

R.I. Analytical Laboratories, Inc.

Laboratory Report

Envirotech Laboratories, Inc.

Work Order #: 2104-05686

Project Name: PLYMOUTH ENV.

Sample Number: 001
Sample Description: WW-210834 GW-14
Sample Type : GRAB
Sample Date / Time : 4/08/2021 @ 08:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Metals							
Mercury	<0.00050	0.00050	mg/l	EPA 245.1	4/16/2021	12:47	BB
Mercury Digestion				EPA 245.1	4/16/2021	11:44	RMS

Sample Number: 002
Sample Description: WW-210835 BRADFORD
Sample Type : GRAB
Sample Date / Time : 4/08/2021 @ 08:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
Total Metals							
Mercury	<0.00050	0.00050	mg/l	EPA 245.1	4/16/2021	12:51	BB
Mercury Digestion				EPA 245.1	4/16/2021	11:44	RMS

New England ChromaChem
6 Nichols Street
Salem, MA 01970
978-744-6600

MA DEP Lab. M-MA072 RI Lab. LAO00364

Client: Envirotech Laboratory, Inc.
State: Liquid

			Analytical Results									
Lab ID	**Client ID**	**Date Sampled**	**TOC mg/L**									
104224	WW-210834 Total	04/08/21	0.615									
104225	WW-210834 Dissolved	04/08/21	0.377									
104227	WW-210835A Total	04/08/21	0.641									
104228	WW-210835A Dissolved	04/08/21	0.446									
104230	WW-210835B Dissolved	04/08/21	0.032									

Analytical Methodology

Analyte	**Method**	**Detection Limit**	**PQL**	**Units**	**Date Analyzed**	**Cert Status**
TOC	Standard Methods 5310C	0.0170	0.0850	mg/L	04/13/21	N

Form: Mis

Electronically signed and approved by: Bruce L. Bornstein Date: 04/14/21

New England ChromaChem
6 Nichols Street
Salem, MA 01970
978-744-6600
MA DEP Lab. M-MA072 RI Lab. LAO00364

Sample Information

EPA Method 8260B Extended Volatile Organic Compounds	
Lab ID:	104226
Client:	Envirotech Laboratory, Inc.
Client ID:	WW-210834
State:	Liquid
Date Sampled:	04/08/21
Date Received:	04/13/21
Date Analyzed:	04/13/21

Analytical Results

Parameter	Results ug/L	Parameter	Results ug/L
Acetone*	ND	2-Chlorotoluene	ND
Acetonitrile	ND	4-Chlorotoluene	ND
Acrolein	ND	Crotonaldehyde	ND
Acrylonitrile	ND	1,2-Dibromo-3-chloropropane	ND
Allyl alcohol	ND	Dibromochloromethane	ND
Allyl chloride	ND	1,2-Dibromoethane	ND
n-Amyl acetate	ND	Dibromomethane	ND
Benzene	ND	1,2-Dichlorobenzene	ND
Benzyl chloride	ND	1,3-Dichlorobenzene	ND
Bis(2-chloroethyl)sulfide	ND	1,4-Dichlorobenzene	ND
Bromoacetone	ND	Cis-1,4-dichloro-2-butene	ND
Bromobenzene	ND	Trans-1,4-dichloro-2-butene	ND
Bromochloromethane	ND	Dichlorodifluoromethane	ND
Bromodichloromethane	ND	1,1-Dichloroethane	ND
Bromoform	ND	1,2-Dichloroethane	ND
Bromomethane	ND	1,1-Dichloroethene	ND
n-Butanol	ND	cis-1,2-Dichloroethene	ND
2-Butanone	ND	Trans-1,2-Dichloroethene	ND
t-Butyl Alcohol	ND	1,2-Dichloropropane	ND
n-Butylbenzene	ND	1,3-Dichloropropane	ND
sec-Butylbenzene	ND	2,2-Dichloropropane	ND
tert-Butylbenzene	ND	1,3-Dichloro-2-propanol	ND
Carbon disulfide	ND	1,1-Dichloropropene	ND
Carbon tetrachloride	ND	Cis-1,3-dichloropropene	ND
Chloral hydrate	ND	Trans-1,3-dichloropropene	ND
Chlorobenzene	ND	1,2,3,4-Diepoxybutane	ND
2-Chloro-1,3-butadiene	ND	Diethyl ether	ND
Chlorobromomethane	ND	Diisopropyl ether	ND
Chloroethane	ND	1,4-Dioxane	ND
2-Chloroethanol	ND	Epiclhorohydrin	ND
2-Chloroethyl vinyl ether	ND	Ethanol	ND
Chloroform	ND	Ethyl acetate	ND
Chloromethane	ND	Ethylbenzene	ND
Chloropropene	ND	Ethylene oxide	ND
3-Chloropropionitrile	ND	Ethyl methacrylate	ND

CONTINUED ON FOLLOWING PAGE

EPA Method 8260 Volatile Organic Compounds

Lab ID:	104226
Client ID:	WW-210834

Analytical Results

Parameter	Results ug/L	Parameter	Results ug/L
Ethyl tert-butyl ether	ND	Propargyl alcohol	ND
Hexachlorobutadiene	ND	β-Propiolactone	ND
Hexachloroethane	ND	Propionitrile	ND
2-Hexanone	ND	N-Propylamine	ND
2-Hydroxypropionitrile	ND	N-Propylbenzene	ND
Iodomethane	ND	Pyridine	ND
Isobutyl alcohol	ND	Styrene	ND
Isopropyl acetate	ND	1,1,1,2-Tetrachloroethane	ND
Isopropylbenzene	ND	1,1,2,2-Tetrachloroethane	ND
p-Isopropyltoluene	ND	Tert-Amyl methyl ether	ND
Malononitrile	ND	Tetrachloroethene	ND
Methacrylonitrile	ND	Tetrahydrofuran	ND
Methanol	ND	Toluene	ND
Methylene Chloride	ND	o-Toluidine	ND
Methyl iodide	ND	1,2,3-Trichlorobenzene	ND
Methyl methacrylate	ND	1,2,4-Trichlorobenzene	ND
4-Methyl-2-pentanone	ND	1,1,1-Trichloroethane	ND
MTBE	ND	1,1,2-Trichloroethane	ND
Naphthalene	ND	Trichloroethene	ND
Nitrobenzene	ND	Trichlorofluoromethane	ND
2-Nitropropane	ND	1,2,3-Trichloropropane	ND
n-Nitroso-di-n-butylamine	ND	1,3,5-Trimethylbenzene	ND
Paraldehyde	ND	1,2,4-Trimethylbenzene	ND
Pentachloroethane	ND	Vinyl Acetate	ND
2-Pentanone	ND	Vinyl Chloride	ND
2-Picoline	ND	M&P Xylene	ND
1-Propanol	ND	o-Xylene	ND
2-Propanol	ND		

Surrogate Standard Recoveries (%)

Benzene-d6	100
4-Bromofluorobenzene	100
1,2-Dichlorobenzene-d4	101

Note: This sample exhibited excessive foaming and could not be analyzed at a lower detection limit.

ND = < Method Detection Limit
NA = Not Analyzed
Method Detection Limit: 1 ug/L *Acetone Method Detection Limit = 10 ug/L

MA does not offer certification for this method.

Electronically signed and approved by: Mr. Bruce A. Bornstein, Lab Director

New England ChromaChem
6 Nichols Street
Salem, MA 01970
978-744-6600
MA DEP Lab. M-MA072 RI Lab. LAO00364

Sample Information

EPA Method 8260B Extended Volatile Organic Compounds	
Lab ID:	104229
Client:	Envirotech Laboratory, Inc.
Client ID:	WW-210835A
State:	Liquid
Date Sampled:	04/08/21
Date Received:	04/13/21
Date Analyzed:	04/14/21

Analytical Results

Parameter	Results ug/L	Parameter	Results ug/L
Acetone*	ND	2-Chlorotoluene	ND
Acetonitrile	ND	4-Chlorotoluene	ND
Acrolein	ND	Crotonaldehyde	ND
Acrylonitrile	ND	1,2-Dibromo-3-chloropropane	ND
Allyl alcohol	ND	Dibromochloromethane	ND
Allyl chloride	ND	1,2-Dibromoethane	ND
n-Amyl acetate	ND	Dibromomethane	ND
Benzene	ND	1,2-Dichlorobenzene	ND
Benzyl chloride	ND	1,3-Dichlorobenzene	ND
Bis(2-chloroethyl)sulfide	ND	1,4-Dichlorobenzene	ND
Bromoacetone	ND	Cis-1,4-dichloro-2-butene	ND
Bromobenzene	ND	Trans-1,4-dichloro-2-butene	ND
Bromochloromethane	ND	Dichlorodifluoromethane	ND
Bromodichloromethane	ND	1,1-Dichloroethane	ND
Bromoform	ND	1,2-Dichloroethane	ND
Bromomethane	ND	1,1-Dichloroethene	ND
n-Butanol	ND	cis-1,2-Dichloroethene	ND
2-Butanone	ND	Trans-1,2-Dichloroethene	ND
t-Butyl Alcohol	ND	1,2-Dichloropropane	ND
n-Butylbenzene	ND	1,3-Dichloropropane	ND
sec-Butylbenzene	ND	2,2-Dichloropropane	ND
tert-Butylbenzene	ND	1,3-Dichloro-2-propanol	ND
Carbon disulfide	ND	1,1-Dichloropropene	ND
Carbon tetrachloride	ND	Cis-1,3-dichloropropene	ND
Chloral hydrate	ND	Trans-1,3-dichloropropene	ND
Chlorobenzene	ND	1,2,3,4-Diepoxybutane	ND
2-Chloro-1,3-butadiene	ND	Diethyl ether	ND
Chlorobromomethane	ND	Diisopropyl ether	ND
Chloroethane	ND	1,4-Dioxane	ND
2-Chloroethanol	ND	Epichorohydrin	ND
2-Chloroethyl vinyl ether	ND	Ethanol	ND
Chloroform	ND	Ethyl acetate	ND
Chloromethane	ND	Ethylbenzene	ND
Chloropropene	ND	Ethylene oxide	ND
3-Chloropropionitrile	ND	Ethyl methacrylate	ND

CONTINUED ON FOLLOWING PAGE

EPA Method 8260 Volatile Organic Compounds

Lab ID:	104229
Client ID:	WW-210835A

Analytical Results

Parameter	Results ug/L	Parameter	Results ug/L
Ethyl tert-butyl ether	ND	Propargyl alcohol	ND
Hexachlorobutadiene	ND	β-Propiolactone	ND
Hexachloroethane	ND	Propionitrile	ND
2-Hexanone	ND	N-Propylamine	ND
2-Hydroxypropionitrile	ND	N-Propylbenzene	ND
Iodomethane	ND	Pyridine	ND
Isobutyl alcohol	ND	Styrene	ND
Isopropyl acetate	ND	1,1,1,2-Tetrachloroethane	ND
Isopropylbenzene	ND	1,1,2,2-Tetrachloroethane	ND
p-Isopropyltoluene	ND	Tert-Amyl methyl ether	ND
Malononitrile	ND	Tetrachloroethene	ND
Methacrylonitrile	ND	Tetrahydrofuran	ND
Methanol	ND	Toluene	ND
Methylene Chloride	ND	o-Toluidine	ND
Methyl iodide	ND	1,2,3-Trichlorobenzene	ND
Methyl methacrylate	ND	1,2,4-Trichlorobenzene	ND
4-Methyl-2-pentanone	ND	1,1,1-Trichloroethane	ND
MTBE	ND	1,1,2-Trichloroethane	ND
Naphthalene	ND	Trichloroethene	ND
Nitrobenzene	ND	Trichlorofluoromethane	ND
2-Nitropropane	ND	1,2,3-Trichloropropane	ND
n-Nitroso-di-n-butylamine	ND	1,3,5-Trimethylbenzene	ND
Paraldehyde	ND	1,2,4-Trimethylbenzene	ND
Pentachloroethane	ND	Vinyl Acetate	ND
2-Pentanone	ND	Vinyl Chloride	ND
2-Picoline	ND	M&P Xylene	ND
1-Propanol	ND	o-Xylene	ND
2-Propanol	ND		

Surrogate Standard Recoveries (%)

Benzene-d6	102
4-Bromofluorobenzene	102
1,2-Dichlorobenzene-d4	100

Note: This sample exhibited excessive foaming and could not be analyzed at a lower detection limit.

ND = < Method Detection Limit
NA = Not Analyzed
Method Detection Limit: 1 ug/L *Acetone Method Detection Limit = 10 ug/L

MA does not offer certification for this method.

Electronically signed and approved by: Mr. Bruce A. Bornstein, Lab Director

SCANNED

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Groundwater Eel River** -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/8/21	0810	GW-14	3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Glass	Ortho-phosphate	NONE
4/8/21	0830	Bradford	3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Glass	Ortho-phosphate	NONE

WW 210884

WW 210885

NOTE: **Analysis needed for reporting in lowest detection possible**; Total Dissolved Solids,O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time
4/8/21 1435

Received By: Date/Time:

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, December 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Groundwater Eel River*
Project Number: *DW-1*
Sampled By: *Kim Tower*
Lab Order Number: *WW-212607*
Date Received: *11/03/21*

Comments:

Sample Type	Sample Time	Sample Date	Comments			
DW-1 A	09:00	11/03/21				
Parameters	**Units**	**Test Results**	**Reportable Limits**	**Date Analyzed**	**Analyst**	**Method**
Nitrate-N	mg/L	0.21	0.01	11/04/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	11/04/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.70	NA	11/17/21	KB	Calculation
Total Dissolved Solids	mg/L	470	6.0	11/10/21	KB	SM 2540 C
Total Phosphorous (P)	mg/L	0.026	0.005	11/28/21	KB	SM 4500-P-B,E
Total Organic Carbon*	mg/L	1.25	0.017	11/11/21	NEC*	SM 5310 C
Volatile Organic Compounds*	ug/L	None Detected	*	11/09/21	NEC*	*
Total Iron	mg/L	2.17	0.01	11/12/21	KB	EPA 200.7
Boron	mg/L	0.016	0.010	11/12/21	KB	EPA 200.7
Copper	mg/L	BRL	0.003	11/12/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	0.49	0.2	11/15/21	MS/KB	SM4500-Norg B-C
Chloride	mg/L	270	3.0	11/04/21	SD	EPA 300.0
Mercury*	mg/L	<0.00050	0.0005	11/10/21	RIA*	EPA 245.1
Dissolved Kjeldhal Nitrogen	mg/L	0.49	0.20	11/15/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.911	0.017	11/11/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.59	NA	11/17/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.17	NA	11/17/21	KB	Calculation
Ortho Phosphorous (P)	mg/L	0.006	0.005	11/05/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	0.339	NA	11/16/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	< 0.20	NA	11/17/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.70	NA	11/17/21	KB	Calculation
Ammonia-N	mg/L	0.32	0.02	11/04/21	CLM	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, December 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:	*DW-1*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212607*	
Date Received:	*11/03/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
DW-1 A	09:00	11/03/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari

Ronald J. Saari
Laboratory Director

New England Chromachem
6 Nichols Street
Salem, MA 01970
978-744-6600

Sample Information

EPA Method 524.2 Rev 4.1 Volatile Organic Compounds in Water	
Lab ID:	111233
Client:	Envirotech Laboratory, Inc.
Client ID:	WW-212607
State:	Liquid
Date Sampled:	11/03/21
Date Received:	11/09/21
Date Analyzed:	11/09/21

Regulated VOC's	Results (ug/L)	MCL (ug/L)
Benzene	ND	5
Carbon Tetrachloride	ND	5
1,1-Dichloroethene	ND	7
1,2-Dichloroethane	ND	5
1,2-Dichlorobenzene	ND	600
1,4-Dichlorobenzene	ND	5
Trichloroethene	ND	5
1,1,1-Trichloroethane	ND	200
Vinyl Chloride	ND	2
Chlorobenzene	ND	100
cis-1,2-dichloroethene	ND	70
trans-1,2-dichloroethene	ND	100
1,2-Dichloropropane	ND	5
Ethylbenzene	ND	700
Styrene	ND	100
Tetrachloroethene	ND	5
Toluene	ND	1000
Xylenes(Total)	ND	10000
Methylene Chloride	ND	5
1,2,4-Trichlorobenzene	ND	70
1,1,2-Trichloroethane	ND	5

Unregulated VOC's	Results (ug/L)
Acetone*	ND
Bromobenzene	ND
Bromochloromethane	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
2-Butanone	ND
N-Butylbenzene	ND
Sec-Butylbenzene	ND
Tert-Butylbenzene	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
2-Chlorotoluene	ND
4-Chlorotoluene	ND
Dibromochloromethane	ND
1,2-Dibromo-3-Chloropropane	ND
1,2-Dibromoethane	ND
Dibromomethane	ND
1,3-Dichlorobenzene	ND
Dichlorodifluoromethane	ND
1,1-Dichloroethane	ND
1,3-Dichloropropane	ND
2,2-Dichloropropane	ND
1,1-Dichloropropene	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Hexachlorobutadiene	ND
Isopropylbenzene	ND
P-Isopropyltoluene	ND
Methyl-tert-butyl ether	ND
Naphthalene	ND
N-Propylbenzene	ND
1,1,1,2-Tetrachloroethane	ND
1,1,2,2-Tetrachloroethane	ND
1,2,3-Trichlorobenzene	ND
Trichlorofluoromethane	ND
1,2,3-Trichloropropane	ND
1,2,4-Trimethylbenzene	ND
1,3,5-Trimethylbenzene	ND

* Acetone Detection Limit = 50 ug/L
ND = < Method Detection Limit
NA = Not Analyzed
MRL = 2.5 ug/L
Note: This sample exhibited excessive foaming and could not be analyzed at a lower detection limit.

Surrogate Standard Recoveries	%
Benzene-d6	103
4-Bromofluorobenzene	97
1,2-Dichlorobenzene-d4	93

MCL TTHM's = 80 ug/L
Method Detection Limit = 2.5 ug/L
Analysis performed per 310CMR42

Electronically signed and approved by Mr. Bruce A. Bornstein, Lab Director Date: 11/10/2021

New England ChromaChem
6 Nichols Street
Salem, MA 01970
978-744-6600

MA DEP Lab. M-MA072 RI Lab. LAO00364

Client: Envirotech Laboratory, Inc.
State: Liquid

			Analytical Results									
Lab ID	**Client ID**	**Date Sampled**	**TOC mg/L**									
111307	WW-212607 Total	11/03/21	1.25									
111308	WW-212607 Dissolved	11/03/21	1.04									
111309	WW-212608 Total	11/03/21	1.28									
111310	WW-212608 Dissolved	11/03/21	1.03									
111311	WW-212609 Total	11/03/21	0.170									
111312	WW-212609 Dissolved	11/03/21	0.125									
111313	WW-212618 Total	11/04/21	1.20									
111314	WW-212618 Dissolved	11/04/21	0.658									
111315	WW-212619 Total	11/04/21	1.86									
111316	WW-212619 Dissolved	11/04/21	1.68									
111317	WW-212620 Total	11/04/21	0.139									
111318	WW-212620 Dissolved	11/04/21	0.142									
111319	WW-212621 Total	11/04/21	0.284									
111320	WW-212621 Dissolved	11/04/21	0.269									
111321	WW-212644 Total	11/08/21	0.602									
111322	WW-212644 Dissolved	11/08/21	1.06									
111323	WW-212645A Total	11/08/21	0.628									
111324	WW-212645A Dissolved	11/08/21	0.515									
111325	WW-212645B Dissolved FILT. BLK	11/08/21	0.129									

Analytical Methodology							
Analyte	**Method**	**Detection Limit**	**MRL**	**Units**	**Date Analyzed**	**Cert Status**	DF
TOC	Standard Methods 5310C	0.0170	0.0850	mg/L	11/11/21	N	1

Form: Mis

Electronically signed and approved by: Bruce A. Bornstein Date: 11/12/21

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, December 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:	*A13*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212608*	
Date Received:	*11/03/21*	

Sample Type A13 A	***Sample Time*** 10:45	***Sample Date*** 11/03/21	***Comments***			
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.26	0.01	11/04/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	11/04/21	SD	EPA 300.0
Total Nitrogen	mg/L	1.17	NA	11/17/21	KB	Calculation
Total Dissolved Solids	mg/L	470	6.0	11/10/21	KB	SM 2540 C
Total Phosphorous (P)	mg/L	0.028	0.005	11/28/21	KB	SM 4500-P-B,E
Total Organic Carbon*	mg/L	1.28	0.017	11/11/21	NEC*	SM 5310 C
Volatile Organic Compounds*	ug/L	None Detected	*	11/09/21	NEC*	*
Total Iron	mg/L	2.18	0.01	11/12/21	KB	EPA 200.7
Boron	mg/L	0.016	0.010	11/12/21	KB	EPA 200.7
Copper	mg/L	BRL	0.003	11/12/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	0.91	0.2	11/15/21	MS/KB	SM4500-Norg B-C
Chloride	mg/L	280	3.0	11/04/21	SD	EPA 300.0
Mercury*	mg/L	<0.00050	0.0005	11/10/21	RIA*	EPA 245.1
Dissolved Kjeldhal Nitrogen	mg/L	0.70	0.20	11/15/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.901	0.017	11/11/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.61	NA	11/17/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.35	NA	11/17/21	KB	Calculation
Ortho Phosphorous (P)	mg/L	0.005	0.005	11/05/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	0.379	NA	11/16/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.21	NA	11/17/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.96	NA	11/17/21	KB	Calculation
Ammonia-N	mg/L	0.35	0.02	11/04/21	CLM	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, December 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:	*A13*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212608*	
Date Received:	*11/03/21*	

Sample Type	*Sample Time*	*Sample Date*	*Comments*			
A13 A	10:45	11/03/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari

Ronald J. Saari
Laboratory Director

New England Chromachem
6 Nichols Street
Salem, MA 01970
978-744-6600

Sample Information

EPA Method 524.2 Rev 4.1 Volatile Organic Compounds in Water	
Lab ID:	111234
Client:	Envirotech Laboratory, Inc.
Client ID:	WW-212608
State:	Liquid
Date Sampled:	11/03/21
Date Received:	11/09/21
Date Analyzed:	11/09/21

Regulated VOC's	Results (ug/L)	MCL (ug/L)
Benzene	ND	5
Carbon Tetrachloride	ND	5
1,1-Dichloroethene	ND	7
1,2-Dichloroethane	ND	5
1,2-Dichlorobenzene	ND	600
1,4-Dichlorobenzene	ND	5
Trichloroethene	ND	5
1,1,1-Trichloroethane	ND	200
Vinyl Chloride	ND	2
Chlorobenzene	ND	100
cis-1,2-dichloroethene	ND	70
trans-1,2-dichloroethene	ND	100
1,2-Dichloropropane	ND	5
Ethylbenzene	ND	700
Styrene	ND	100
Tetrachloroethene	ND	5
Toluene	ND	1000
Xylenes(Total)	ND	10000
Methylene Chloride	ND	5
1,2,4-Trichlorobenzene	ND	70
1,1,2-Trichloroethane	ND	5

Unregulated VOC's	Results (ug/L)
Acetone*	ND
Bromobenzene	ND
Bromochloromethane	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
2-Butanone	ND
N-Butylbenzene	ND
Sec-Butylbenzene	ND
Tert-Butylbenzene	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
2-Chlorotoluene	ND
4-Chlorotoluene	ND
Dibromochloromethane	ND
1,2-Dibromo-3-Chloropropane	ND
1,2-Dibromoethane	ND
Dibromomethane	ND
1,3-Dichlorobenzene	ND
Dichlorodifluoromethane	ND
1,1-Dichloroethane	ND
1,3-Dichloropropane	ND
2,2-Dichloropropane	ND
1,1-Dichloropropene	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Hexachlorobutadiene	ND
Isopropylbenzene	ND
P-Isopropyltoluene	ND
Methyl-tert-butyl ether	ND
Naphthalene	ND
N-Propylbenzene	ND
1,1,1,2-Tetrachloroethane	ND
1,1,2,2-Tetrachloroethane	ND
1,2,3-Trichlorobenzene	ND
Trichlorofluoromethane	ND
1,2,3-Trichloropropane	ND
1,2,4-Trimethylbenzene	ND
1,3,5-Trimethylbenzene	ND

* Acetone Detection Limit = 50 ug/L
ND = < Method Detection Limit
NA = Not Analyzed
MRL = 2.5 ug/L
Note: This sample exhibited excessive foaming and could not be analyzed at a lower detection limit.

Surrogate Standard Recoveries	%
Benzene-d6	97
4-Bromofluorobenzene	99
1,2-Dichlorobenzene-d4	98

MCL TTHM's = 80 ug/L
Method Detection Limit = 2.5 ug/L
Analysis performed per 310CMR42

Electronically signed and approved by Mr. Bruce A. Bornstein, Lab Director Date: 11/10/2021

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, December 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:	*A17*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212609*	
Date Received:	*11/03/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
A17 A	13:10	11/03/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	1.30	0.01	11/04/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	11/04/21	SD	EPA 300.0
Total Nitrogen	mg/L	1.7	NA	11/17/21	KB	Calculation
Total Dissolved Solids	mg/L	310	6.0	11/10/21	KB	SM 2540 C
Total Phosphorous (P)	mg/L	0.010	0.005	11/28/21	KB	SM 4500-P-B,E
Total Organic Carbon*	mg/L	0.170	0.017	11/11/21	NEC*	SM 5310 C
Volatile Organic Compounds*	ug/L	None Detected	*	11/09/21	NEC*	*
Total Iron	mg/L	BRL	0.01	11/12/21	KB	EPA 200.7
Boron	mg/L	0.010	0.010	11/12/21	KB	EPA 200.7
Copper	mg/L	BRL	0.003	11/12/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	0.42	0.2	11/15/21	MS/KB	SM4500-Norg B-C
Chloride	mg/L	150	3.0	11/04/21	SD	EPA 300.0
Mercury*	mg/L	<0.00050	0.0005	11/10/21	RIA*	EPA 245.1
Dissolved Kjeldhal Nitrogen	mg/L	0.35	0.20	11/15/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	BRL	0.017	11/11/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.29	NA	11/17/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.20	NA	11/17/21	KB	Calculation
Ortho Phosphorous (P)	mg/L	0.011	0.005	11/05/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	0.170	NA	11/16/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.20	NA	11/17/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	1.7	NA	11/17/21	KB	Calculation
Ammonia-N	mg/L	BRL	0.02	11/04/21	CLM	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, December 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:	*A17*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212609*	
Date Received:	*11/03/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
A17 A	13:10	11/03/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J Saari

Ronald J. Saari
Laboratory Director

New England Chromachem
6 Nichols Street
Salem, MA 01970
978-744-6600

Sample Information

EPA Method 524.2 Rev 4.1 Volatile Organic Compounds in Water	
Lab ID:	111235
Client:	Envirotech Laboratory, Inc.
Client ID:	WW-212609
State:	Liquid
Date Sampled:	11/03/21
Date Received:	11/09/21
Date Analyzed:	11/09/21

Regulated VOC's	Results (ug/L)	MCL (ug/L)
Benzene	ND	5
Carbon Tetrachloride	ND	5
1,1-Dichloroethene	ND	7
1,2-Dichloroethane	ND	5
1,2-Dichlorobenzene	ND	600
1,4-Dichlorobenzene	ND	5
Trichloroethene	ND	5
1,1,1-Trichloroethane	ND	200
Vinyl Chloride	ND	2
Chlorobenzene	ND	100
cis-1,2-dichloroethene	ND	70
trans-1,2-dichloroethene	ND	100
1,2-Dichloropropane	ND	5
Ethylbenzene	ND	700
Styrene	ND	100
Tetrachloroethene	ND	5
Toluene	ND	1000
Xylenes(Total)	ND	10000
Methylene Chloride	ND	5
1,2,4-Trichlorobenzene	ND	70
1,1,2-Trichloroethane	ND	5

* Acetone Detection Limit = 10 ug/L
ND = < Method Detection Limit
NA = Not Analyzed
MRL = 0.5 ug/L
Dilution Factor = 1

Unregulated VOC's	Results (ug/L)
Acetone*	ND
Bromobenzene	ND
Bromochloromethane	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
2-Butanone	ND
N-Butylbenzene	ND
Sec-Butylbenzene	ND
Tert-Butylbenzene	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
2-Chlorotoluene	ND
4-Chlorotoluene	ND
Dibromochloromethane	ND
1,2-Dibromo-3-Chloropropane	ND
1,2-Dibromoethane	ND
Dibromomethane	ND
1,3-Dichlorobenzene	ND
Dichlorodifluoromethane	ND
1,1-Dichloroethane	ND
1,3-Dichloropropane	ND
2,2-Dichloropropane	ND
1,1-Dichloropropene	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Hexachlorobutadiene	ND
Isopropylbenzene	ND
P-Isopropyltoluene	ND
Methyl-tert-butyl ether	ND
Naphthalene	ND
N-Propylbenzene	ND
1,1,1,2-Tetrachloroethane	ND
1,1,2,2-Tetrachloroethane	ND
1,2,3-Trichlorobenzene	ND
Trichlorofluoromethane	ND
1,2,3-Trichloropropane	ND
1,2,4-Trimethylbenzene	ND
1,3,5-Trimethylbenzene	ND

Surrogate Standard Recoveries	%
Benzene-d6	97
4-Bromofluorobenzene	100
1,2-Dichlorobenzene-d4	107

MCL TTHM's = 80 ug/L
Method Detection Limit = 0.5 ug/L
Analysis performed per 310CMR42

Electronically signed and approved by Mr. Bruce A. Bornstein, Lab Director Date: 11/10/2021

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 11/5/2021
Date Reported: 11/11/2021
P.O. Number 212607

Work Order #: 2111-19159

Project Name: PLYMOUTH ENV. - WW-212607

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

R.I. Analytical Laboratories, Inc.

Laboratory Report

Envirotech Laboratories, Inc.
Work Order #: 2111-19159
Project Name: PLYMOUTH ENV. - WW-212607

Sample Number: 001
Sample Description: WW-212607
Sample Type : GRAB
Sample Date / Time : 11/03/2021 @ 09:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals						
Mercury	<0.00050	0.00050	mg/l	EPA 245.1	11/10/2021 13:59	MKS
Mercury Digestion				EPA 245.1	11/10/2021 11:17	BB

Sample Number: 002
Sample Description: WW-212608
Sample Type : GRAB
Sample Date / Time : 11/03/2021 @ 10:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals						
Mercury	<0.00050	0.00050	mg/l	EPA 245.1	11/10/2021 14:02	MKS
Mercury Digestion				EPA 245.1	11/10/2021 11:17	BB

Sample Number: 003
Sample Description: WW-212609
Sample Type : GRAB
Sample Date / Time : 11/03/2021 @ 13:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals						
Mercury	<0.00050	0.00050	mg/l	EPA 245.1	11/10/2021 14:06	MKS
Mercury Digestion				EPA 245.1	11/10/2021 11:17	BB

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Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Groundwater Eel River** -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
WW-212607 11/3/21	0900	DW-1	3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Plastic	Total Phosphorus and Ortho-phosphate (field filtered)	NONE
2608 11/3/21	1045	A13	3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Plastic	Total Phosphorus and Ortho-phosphate (field filtered)	NONE

NOTE: **Analysis needed for reporting in lowest detection possible**; Total Dissolved Solids,O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time
Kim Tower 11/3/21

Received By: Date/Time:
[signature] 11/3/21 1400

SCANNED
DEC 30 2021

L

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Groundwater Eel River** -Plymouth MA
Sampler: Kim Tower (KT)

ww-212609

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
11/3/21	1310	A17	3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Plastic	Total Phosphorus and Ortho-phosphate (field filtered)	NONE
			3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Plastic	Total Phosphorus and Ortho-phosphate (field filtered)	NONE

NOTE: **Analysis needed for reporting in lowest detection possible**; Total Dissolved Solids,O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time
Kim Tower 11/3/21

Received By: Date/Time:

SCANNED
DEC 30 2021

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, December 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:	*3S*	
Sampled By:	*Kim Tower*	SHOULD BE 2S not 3S
Lab Order Number:	*WW-212618*	
Date Received:	*11/04/21*	

Sample Type 2S 3S A	***Sample Time*** 09:10	***Sample Date*** 11/04/21	***Comments***			
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.59	0.01	11/05/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	11/05/21	SD	EPA 300.0
Total Nitrogen	mg/L	1.2	NA	11/16/21	MS/KB	Calculation
Total Dissolved Solids	mg/L	70	6.0	11/12/21	KB	SM 2540 C
Total Organic Carbon*	mg/L	1.20	0.017	11/11/21	NEC*	SM 5310 C
Volatile Organic Compounds*	ug/L	None Detected	*	11/09/21	NEC*	*
Total Iron	mg/L	0.89	0.01	11/12/21	KB	EPA 200.7
Boron	mg/L	0.018	0.010	11/12/21	KB	EPA 200.7
Copper	mg/L	0.003	0.003	11/12/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	0.63	0.2	11/15/21	MS/KB	SM4500-Norg B-C
Chloride	mg/L	26	3.0	11/05/21	SD	EPA 300.0
Mercury*	mg/L	<0.00050	0.0005	11/10/21	RIA*	EPA 245.1
Total Phosphorous (P)	mg/L	0.091	0.005	11/28/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	11/15/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.529	0.017	11/11/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.59	NA	11/16/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.20	NA	11/16/21	KB	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	11/05/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	0.671	NA	11/16/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.63	NA	11/16/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.59	NA	11/16/21	MS/KB	Calculation
Ammonia-N	mg/L	BRL	0.02	11/11/21	CLM	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, December 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:	*3S*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212618*	
Date Received:	*11/04/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
3S A	09:10	11/04/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari
Ronald J. Saari
Laboratory Director

New England Chromachem
6 Nichols Street
Salem, MA 01970
978-744-6600

Sample Information

EPA Method 524.2 Rev 4.1 Volatile Organic Compounds in Water	
Lab ID:	111236
Client:	Envirotech Laboratory, Inc.
Client ID:	WW-212618
State:	Liquid
Date Sampled:	11/03/21
Date Received:	11/09/21
Date Analyzed:	11/09/21

Regulated VOC's	Results (ug/L)	MCL (ug/L)
Benzene	ND	5
Carbon Tetrachloride	ND	5
1,1-Dichloroethene	ND	7
1,2-Dichloroethane	ND	5
1,2-Dichlorobenzene	ND	600
1,4-Dichlorobenzene	ND	5
Trichloroethene	ND	5
1,1,1-Trichloroethane	ND	200
Vinyl Chloride	ND	2
Chlorobenzene	ND	100
cis-1,2-dichloroethene	ND	70
trans-1,2-dichloroethene	ND	100
1,2-Dichloropropane	ND	5
Ethylbenzene	ND	700
Styrene	ND	100
Tetrachloroethene	ND	5
Toluene	ND	1000
Xylenes(Total)	ND	10000
Methylene Chloride	ND	5
1,2,4-Trichlorobenzene	ND	70
1,1,2-Trichloroethane	ND	5

* Acetone Detection Limit = 10 ug/L
ND = < Method Detection Limit
NA = Not Analyzed
MRL = 0.5 ug/L
Dilution Factor = 1

Unregulated VOC's	Results (ug/L)
Acetone*	ND
Bromobenzene	ND
Bromochloromethane	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
2-Butanone	ND
N-Butylbenzene	ND
Sec-Butylbenzene	ND
Tert-Butylbenzene	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
2-Chlorotoluene	ND
4-Chlorotoluene	ND
Dibromochloromethane	ND
1,2-Dibromo-3-Chloropropane	ND
1,2-Dibromoethane	ND
Dibromomethane	ND
1,3-Dichlorobenzene	ND
Dichlorodifluoromethane	ND
1,1-Dichloroethane	ND
1,3-Dichloropropane	ND
2,2-Dichloropropane	ND
1,1-Dichloropropene	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Hexachlorobutadiene	ND
Isopropylbenzene	ND
P-Isopropyltoluene	ND
Methyl-tert-butyl ether	ND
Naphthalene	ND
N-Propylbenzene	ND
1,1,1,2-Tetrachloroethane	ND
1,1,2,2-Tetrachloroethane	ND
1,2,3-Trichlorobenzene	ND
Trichlorofluoromethane	ND
1,2,3-Trichloropropane	ND
1,2,4-Trimethylbenzene	ND
1,3,5-Trimethylbenzene	ND

Surrogate Standard Recoveries	%
Benzene-d6	99
4-Bromofluorobenzene	101
1,2-Dichlorobenzene-d4	107

MCL TTHM's = 80 ug/L
Method Detection Limit = 0.5 ug/L
Analysis performed per 310CMR42

Electronically signed and approved by Mr. Bruce A. Bornstein, Lab Director Date: 11/10/2021

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, December 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:	*3D* SHOULD BE 2D not 3D	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212619*	
Date Received:	*11/04/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
2D 3D A	09:35	11/04/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.16	0.01	11/05/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	11/05/21	SD	EPA 300.0
Total Nitrogen	mg/L	<0.36	NA	11/16/21	MS/KB	Calculation
Total Dissolved Solids	mg/L	71	6.0	11/12/21	KB	SM 2540 C
Total Organic Carbon*	mg/L	1.86	0.017	11/11/21	NEC*	SM 5310 C
Volatile Organic Compounds*	ug/L	None Detected	*	11/09/21	NEC*	*
Total Iron	mg/L	2.73	0.01	11/12/21	KB	EPA 200.7
Boron	mg/L	0.009	0.010	11/12/21	KB	EPA 200.7
Copper	mg/L	BRL	0.003	11/12/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	11/15/21	MS/KB	SM4500-Norg B-C
Chloride	mg/L	30	3.0	11/05/21	SD	EPA 300.0
Mercury*	mg/L	<0.00050	0.0005	11/10/21	RIA*	EPA 245.1
Total Phosphorous (P)	mg/L	0.058	0.005	11/28/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	11/15/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	1.55	0.017	11/11/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.16	NA	11/16/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.20	NA	11/16/21	KB	Calculation
Ortho Phosphorous (P)	mg/L	0.005	0.005	11/05/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	0.31	NA	11/16/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.20	NA	11/16/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	<0.36	NA	11/16/21	KB	Calculation
Ammonia-N	mg/L	BRL	0.02	11/11/21	CLM	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari
Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, December 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:	*3D*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212619*	
Date Received:	*11/04/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
3D A	09:35	11/04/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

New England Chromachem
6 Nichols Street
Salem, MA 01970
978-744-6600

Sample Information

EPA Method 524.2 Rev 4.1 Volatile Organic Compounds in Water	
Lab ID:	111237
Client:	Envirotech Laboratory, Inc.
Client ID:	WW-212619
State:	Liquid
Date Sampled:	11/03/21
Date Received:	11/09/21
Date Analyzed:	11/09/21

Regulated VOC's	Results (ug/L)	MCL (ug/L)
Benzene	ND	5
Carbon Tetrachloride	ND	5
1,1-Dichloroethene	ND	7
1,2-Dichloroethane	ND	5
1,2-Dichlorobenzene	ND	600
1,4-Dichlorobenzene	ND	5
Trichloroethene	ND	5
1,1,1-Trichloroethane	ND	200
Vinyl Chloride	ND	2
Chlorobenzene	ND	100
cis-1,2-dichloroethene	ND	70
trans-1,2-dichloroethene	ND	100
1,2-Dichloropropane	ND	5
Ethylbenzene	ND	700
Styrene	ND	100
Tetrachloroethene	ND	5
Toluene	ND	1000
Xylenes(Total)	ND	10000
Methylene Chloride	ND	5
1,2,4-Trichlorobenzene	ND	70
1,1,2-Trichloroethane	ND	5

* Acetone Detection Limit = 10 ug/L
ND = < Method Detection Limit
NA = Not Analyzed
MRL = 0.5 ug/L
Dilution Factor = 1

Unregulated VOC's	Results (ug/L)
Acetone*	ND
Bromobenzene	ND
Bromochloromethane	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
2-Butanone	ND
N-Butylbenzene	ND
Sec-Butylbenzene	ND
Tert-Butylbenzene	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
2-Chlorotoluene	ND
4-Chlorotoluene	ND
Dibromochloromethane	ND
1,2-Dibromo-3-Chloropropane	ND
1,2-Dibromoethane	ND
Dibromomethane	ND
1,3-Dichlorobenzene	ND
Dichlorodifluoromethane	ND
1,1-Dichloroethane	ND
1,3-Dichloropropane	ND
2,2-Dichloropropane	ND
1,1-Dichloropropene	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Hexachlorobutadiene	ND
Isopropylbenzene	ND
P-Isopropyltoluene	ND
Methyl-tert-butyl ether	ND
Naphthalene	ND
N-Propylbenzene	ND
1,1,1,2-Tetrachloroethane	ND
1,1,2,2-Tetrachloroethane	ND
1,2,3-Trichlorobenzene	ND
Trichlorofluoromethane	ND
1,2,3-Trichloropropane	ND
1,2,4-Trimethylbenzene	ND
1,3,5-Trimethylbenzene	ND

Surrogate Standard Recoveries	%
Benzene-d6	100
4-Bromofluorobenzene	100
1,2-Dichlorobenzene-d4	106

MCL TTHM's = 80 ug/L
Method Detection Limit = 0.5 ug/L
Analysis performed per 310CMR42

Electronically signed and approved by Mr. Bruce A. Bornstein, Lab Director Date: 11/10/2021

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, December 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:	*7SR*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212620*	
Date Received:	*11/04/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
7SR A	11:05	11/04/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.29	0.01	11/05/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	11/05/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.29	NA	11/16/21	MS/KB	Calculation
Total Dissolved Solids	mg/L	440	6.0	11/12/21	KB	SM 2540 C
Total Organic Carbon*	mg/L	0.139	0.017	11/11/21	NEC*	SM 5310 C
Volatile Organic Compounds*	ug/L	None Detected	*	11/09/21	NEC*	*
Total Iron	mg/L	0.99	0.01	11/12/21	KB	EPA 200.7
Boron	mg/L	0.008	0.010	11/12/21	KB	EPA 200.7
Copper	mg/L	BRL	0.003	11/12/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	11/15/21	MS/KB	SM4500-Norg B-C
Chloride	mg/L	270	3.0	11/05/21	SD	EPA 300.0
Mercury*	mg/L	<0.00050	0.0005	11/10/21	RIA*	EPA 245.1
Total Phosphorous (P)	mg/L	0.009	0.005	11/28/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	11/15/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.013	0.017	11/11/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.29	NA	11/16/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.20	NA	11/16/21	KB	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	11/05/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	0.126	NA	11/16/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.20	NA	11/16/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.29	NA	11/16/21	MS/KB	Calculation
Ammonia-N	mg/L	BRL	0.02	11/11/21	CLM	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, December 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:	*7SR*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212620*	
Date Received:	*11/04/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
7SR A	11:05	11/04/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J Saari

Ronald J. Saari
Laboratory Director

New England Chromachem
6 Nichols Street
Salem, MA 01970
978-744-6600

Sample Information

EPA Method 524.2 Rev 4.1 Volatile Organic Compounds in Water	
Lab ID:	111238
Client:	Envirotech Laboratory, Inc.
Client ID:	WW-212620
State:	Liquid
Date Sampled:	11/03/21
Date Received:	11/09/21
Date Analyzed:	11/09/21

Regulated VOC's	Results (ug/L)	MCL (ug/L)
Benzene	ND	5
Carbon Tetrachloride	ND	5
1,1-Dichloroethene	ND	7
1,2-Dichloroethane	ND	5
1,2-Dichlorobenzene	ND	600
1,4-Dichlorobenzene	ND	5
Trichloroethene	ND	5
1,1,1-Trichloroethane	ND	200
Vinyl Chloride	ND	2
Chlorobenzene	ND	100
cis-1,2-dichloroethene	ND	70
trans-1,2-dichloroethene	ND	100
1,2-Dichloropropane	ND	5
Ethylbenzene	ND	700
Styrene	ND	100
Tetrachloroethene	ND	5
Toluene	ND	1000
Xylenes(Total)	ND	10000
Methylene Chloride	ND	5
1,2,4-Trichlorobenzene	ND	70
1,1,2-Trichloroethane	ND	5

Unregulated VOC's	Results (ug/L)
Acetone*	ND
Bromobenzene	ND
Bromochloromethane	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
2-Butanone	ND
N-Butylbenzene	ND
Sec-Butylbenzene	ND
Tert-Butylbenzene	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
2-Chlorotoluene	ND
4-Chlorotoluene	ND
Dibromochloromethane	ND
1,2-Dibromo-3-Chloropropane	ND
1,2-Dibromoethane	ND
Dibromomethane	ND
1,3-Dichlorobenzene	ND
Dichlorodifluoromethane	ND
1,1-Dichloroethane	ND
1,3-Dichloropropane	ND
2,2-Dichloropropane	ND
1,1-Dichloropropene	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Hexachlorobutadiene	ND
Isopropylbenzene	ND
P-Isopropyltoluene	ND
Methyl-tert-butyl ether	ND
Naphthalene	ND
N-Propylbenzene	ND
1,1,1,2-Tetrachloroethane	ND
1,1,2,2-Tetrachloroethane	ND
1,2,3-Trichlorobenzene	ND
Trichlorofluoromethane	ND
1,2,3-Trichloropropane	ND
1,2,4-Trimethylbenzene	ND
1,3,5-Trimethylbenzene	ND

* Acetone Detection Limit = 10 ug/L
ND = < Method Detection Limit
NA = Not Analyzed
MRL = 0.5 ug/L
Dilution Factor = 1

Surrogate Standard Recoveries	%
Benzene-d6	102
4-Bromofluorobenzene	100
1,2-Dichlorobenzene-d4	106

MCL TTHM's = 80 ug/L
Method Detection Limit = 0.5 ug/L
Analysis performed per 310CMR42

Electronically signed and approved by Mr. Bruce A. Bornstein, Lab Director Date: 11/10/2021

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, December 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:	*A15*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212621*	
Date Received:	*11/04/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
A15 A	13:10	11/04/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	2.00	0.01	11/05/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	11/05/21	SD	EPA 300.0
Total Nitrogen	mg/L	2.2	NA	11/17/21	MS/KB	Calculation
Total Dissolved Solids	mg/L	200	6.0	11/12/21	KB	SM 2540 C
Total Organic Carbon*	mg/L	0.284	0.017	11/11/21	NEC*	SM 5310 C
Volatile Organic Compounds*	ug/L	None Detected	*	11/09/21	NEC*	*
Total Iron	mg/L	2.89	0.01	11/12/21	KB	EPA 200.7
Boron	mg/L	0.020	0.010	11/12/21	KB	EPA 200.7
Copper	mg/L	0.004	0.003	11/12/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	0.21	0.2	11/16/21	MS/KB	SM4500-Norg B-C
Chloride	mg/L	77	3.0	11/05/21	SD	EPA 300.0
Mercury*	mg/L	<0.00050	0.0005	11/10/21	RIA*	EPA 245.1
Total Phosphorous (P)	mg/L	0.396	0.005	11/28/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	11/16/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.140	0.017	11/11/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	2.0	NA	11/17/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.20	NA	11/17/21	KB	Calculation
Ortho Phosphorous (P)	mg/L	0.029	0.005	11/05/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	0.144	NA	11/16/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.21	NA	11/17/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	2.0	NA	11/17/21	MS/KB	Calculation
Ammonia-N	mg/L	BRL	0.02	11/11/21	CLM	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari
Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, December 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:	*A15*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212621*	
Date Received:	*11/04/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
A15 A	13:10	11/04/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J Saari

Ronald J. Saari
Laboratory Director

New England Chromachem
6 Nichols Street
Salem, MA 01970
978-744-6600

Sample Information

EPA Method 524.2 Rev 4.1 Volatile Organic Compounds in Water	
Lab ID:	111239
Client:	Envirotech Laboratory, Inc.
Client ID:	WW-212621
State:	Liquid
Date Sampled:	11/03/21
Date Received:	11/09/21
Date Analyzed:	11/09/21

Regulated VOC's	Results (ug/L)	MCL (ug/L)
Benzene	ND	5
Carbon Tetrachloride	ND	5
1,1-Dichloroethene	ND	7
1,2-Dichloroethane	ND	5
1,2-Dichlorobenzene	ND	600
1,4-Dichlorobenzene	ND	5
Trichloroethene	ND	5
1,1,1-Trichloroethane	ND	200
Vinyl Chloride	ND	2
Chlorobenzene	ND	100
cis-1,2-dichloroethene	ND	70
trans-1,2-dichloroethene	ND	100
1,2-Dichloropropane	ND	5
Ethylbenzene	ND	700
Styrene	ND	100
Tetrachloroethene	ND	5
Toluene	ND	1000
Xylenes(Total)	ND	10000
Methylene Chloride	ND	5
1,2,4-Trichlorobenzene	ND	70
1,1,2-Trichloroethane	ND	5

Unregulated VOC's	Results (ug/L)
Acetone*	ND
Bromobenzene	ND
Bromochloromethane	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
2-Butanone	ND
N-Butylbenzene	ND
Sec-Butylbenzene	ND
Tert-Butylbenzene	ND
Chloroethane	ND
Chloroform	ND
Chloromethane	ND
2-Chlorotoluene	ND
4-Chlorotoluene	ND
Dibromochloromethane	ND
1,2-Dibromo-3-Chloropropane	ND
1,2-Dibromoethane	ND
Dibromomethane	ND
1,3-Dichlorobenzene	ND
Dichlorodifluoromethane	ND
1,1-Dichloroethane	ND
1,3-Dichloropropane	ND
2,2-Dichloropropane	ND
1,1-Dichloropropene	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Hexachlorobutadiene	ND
Isopropylbenzene	ND
P-Isopropyltoluene	ND
Methyl-tert-butyl ether	ND
Naphthalene	ND
N-Propylbenzene	ND
1,1,1,2-Tetrachloroethane	ND
1,1,2,2-Tetrachloroethane	ND
1,2,3-Trichlorobenzene	ND
Trichlorofluoromethane	ND
1,2,3-Trichloropropane	ND
1,2,4-Trimethylbenzene	ND
1,3,5-Trimethylbenzene	ND

* Acetone Detection Limit = 10 ug/L
ND = < Method Detection Limit
NA = Not Analyzed
MRL = 0.5 ug/L
Dilution Factor = 1

Surrogate Standard Recoveries	%
Benzene-d6	99
4-Bromofluorobenzene	98
1,2-Dichlorobenzene-d4	100

MCL TTHM's = 80 ug/L
Method Detection Limit = 0.5 ug/L
Analysis performed per 310CMR42

Electronically signed and approved by Mr. Bruce A. Bornstein, Lab Director Date: 11/10/2021

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 11/5/2021
Date Reported: 11/11/2021
P.O. Number 212618

Work Order #: 2111-19157

Project Name: PLYMOUTH ENV. - WW-212618

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

R.I. Analytical Laboratories, Inc.

Laboratory Report

Envirotech Laboratories, Inc.
Work Order #: 2111-19157
Project Name: PLYMOUTH ENV. - WW-212618

Sample Number: 001
Sample Description: WW-212618
Sample Type : GRAB
Sample Date / Time : 11/04/2021 @ 09:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals						
Mercury	<0.00050	0.00050	mg/l	EPA 245.1	11/10/2021 14:08	MKS
Mercury Digestion				EPA 245.1	11/10/2021 11:17	BB

Sample Number: 002
Sample Description: WW-212619
Sample Type : GRAB
Sample Date / Time : 11/04/2021 @ 09:35

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals						
Mercury	<0.00050	0.00050	mg/l	EPA 245.1	11/10/2021 14:09	MKS
Mercury Digestion				EPA 245.1	11/10/2021 11:17	BB

Sample Number: 003
Sample Description: WW-212620
Sample Type : GRAB
Sample Date / Time : 11/04/2021 @ 11:05

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals						
Mercury	<0.00050	0.00050	mg/l	EPA 245.1	11/10/2021 14:10	MKS
Mercury Digestion				EPA 245.1	11/10/2021 11:17	BB

R.I. Analytical Laboratories, Inc.

Laboratory Report

Envirotech Laboratories, Inc.
Work Order #: 2111-19157
Project Name: PLYMOUTH ENV. - WW-212618

Sample Number: 004
Sample Description: WW-212621
Sample Type : GRAB
Sample Date / Time : 11/04/2021 @ 13:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals						
Mercury	<0.00050	0.00050	mg/l	EPA 245.1	11/10/2021 14:11	MKS
Mercury Digestion				EPA 245.1	11/10/2021 11:17	BB

New England ChromaChem
6 Nichols Street
Salem, MA 01970
978-744-6600

MA DEP Lab. M-MA072 RI Lab. LAO00364

Client: Envirotech Laboratory, Inc.
State: Liquid

			Analytical Results									
Lab ID	**Client ID**	**Date Sampled**	**TOC mg/L**									
111307	WW-212607 Total	11/03/21	1.25									
111308	WW-212607 Dissolved	11/03/21	1.04									
111309	WW-212608 Total	11/03/21	1.28									
111310	WW-212608 Dissolved	11/03/21	1.03									
111311	WW-212609 Total	11/03/21	0.170									
111312	WW-212609 Dissolved	11/03/21	0.125									
111313	WW-212618 Total	11/04/21	1.20									
111314	WW-212618 Dissolved	11/04/21	0.658									
111315	WW-212619 Total	11/04/21	1.86									
111316	WW-212619 Dissolved	11/04/21	1.68									
111317	WW-212620 Total	11/04/21	0.139									
111318	WW-212620 Dissolved	11/04/21	0.142									
111319	WW-212621 Total	11/04/21	0.284									
111320	WW-212621 Dissolved	11/04/21	0.269									
111321	WW-212644 Total	11/08/21	0.602									
111322	WW-212644 Dissolved	11/08/21	1.06									
111323	WW-212645A Total	11/08/21	0.628									
111324	WW-212645A Dissolved	11/08/21	0.515									
111325	WW-212645B Dissolved FILT. BLK	11/08/21	0.129									

Analytical Methodology							
Analyte	**Method**	**Detection Limit**	**MRL**	**Units**	**Date Analyzed**	**Cert Status**	DF
TOC	Standard Methods 5310C	0.0170	0.0850	mg/L	11/11/21	N	1

Form: Mis

Electronically signed and approved by: Bruce A. Bornstein Date: 11/12/21

Laboratory:

Chain of Custody

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Groundwater Eel River** -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
11/4/21	0910	3S	3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Plastic	Total Phosphorus and Ortho-phosphate (field filtered)	NONE
11/4/21	0935	3D	3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Plastic	Total Phosphorus and Ortho-phosphate (field filtered)	NONE

MW 212618

MW 212619

NOTE: **Analysis needed for reporting in lowest detection possible**; Total Dissolved Solids,O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time
Kim Tower 11/4/21

Received By: Date/Time:
[signature] 11/4/21 1400

SCANNED
DEC 30 2021

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Groundwater Eel River** -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
11/4/21	1105	7SR	3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN, TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Plastic	Total Phosphorus and Ortho-phosphate (field filtered)	NONE
11/4/21	1310	A1S	3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN, TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Plastic	Total Phosphorus and Ortho-phosphate (field filtered)	NONE

WW 2112620

WW 11/26/21

NOTE: **Analysis needed for reporting in lowest detection possible**; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time
Kim Tow 11/4/21

Received By: Date/Time:
[signature] 11/4/21

SCANNED
NOV 30 2021

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, December 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:	*A19*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212644*	
Date Received:	*11/08/21*	

Sample Type A19 A	***Sample Time*** 12:20	***Sample Date*** 11/08/21	***Comments***			
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.46	0.01	11/09/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	11/09/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.74	NA	11/17/21	MS/KB	Calculation
Total Dissolved Solids	mg/L	42	6.0	11/12/21	KB	SM 2540 C
Total Organic Carbon*	mg/L	0.602	0.017	11/11/21	NEC*	SM 5310 C
Volatile Organic Compounds*	ug/L	See attached	*	11/09/21	NEC*	*
Total Iron	mg/L	0.03	0.01	11/29/21	KB	EPA 200.7
Boron	mg/L	BRL	0.010	11/29/21	KB	EPA 200.7
Copper	mg/L	BRL	0.003	11/29/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	0.28	0.2	11/16/21	MS/KB	SM4500-Norg B-C
Chloride	mg/L	16	3.0	11/09/21	SD	EPA 300.0
Mercury*	mg/L	BRL	0.0005	11/16/21	RIA*	EPA 245.1
Total Phosphorous (P)	mg/L	0.012	0.005	11/28/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.21	0.20	11/16/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.386	0.017	11/11/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.48	NA	11/17/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.21	NA	11/17/21	KB	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	11/11/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	0.216	NA	11/16/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.07	NA	11/17/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.67	NA	11/17/21	MS/KB	Calculation
Ammonia-N	mg/L	BRL	0.02	11/11/21	CLM	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, December 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:	*A19*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212644*	
Date Received:	*11/08/21*	

Sample Type	*Sample Time*	*Sample Date*	*Comments*			
A19 A	12:20	11/08/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

*Trace to low levels of chloroform are occasionally detected in ground water in coastline areas.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

New England Chromachem
6 Nichols Street
Salem, MA 01970
978-744-6600

Sample Information

EPA Method 524.2 Rev 4.1 Volatile Organic Compounds in Water	
Lab ID:	111240
Client:	Envirotech Laboratory, Inc.
Client ID:	WW-212644
State:	Liquid
Date Sampled:	11/03/21
Date Received:	11/09/21
Date Analyzed:	11/09/21

Regulated VOC's	Results (ug/L)	MCL (ug/L)
Benzene	ND	5
Carbon Tetrachloride	ND	5
1,1-Dichloroethene	ND	7
1,2-Dichloroethane	ND	5
1,2-Dichlorobenzene	ND	600
1,4-Dichlorobenzene	ND	5
Trichloroethene	ND	5
1,1,1-Trichloroethane	ND	200
Vinyl Chloride	ND	2
Chlorobenzene	ND	100
cis-1,2-dichloroethene	ND	70
trans-1,2-dichloroethene	ND	100
1,2-Dichloropropane	ND	5
Ethylbenzene	ND	700
Styrene	ND	100
Tetrachloroethene	ND	5
Toluene	ND	1000
Xylenes(Total)	ND	10000
Methylene Chloride	ND	5
1,2,4-Trichlorobenzene	ND	70
1,1,2-Trichloroethane	ND	5

* Acetone Detection Limit = 10 ug/L
ND = < Method Detection Limit
NA = Not Analyzed
MRL = 0.5 ug/L
Dilution Factor = 1

Unregulated VOC's	Results (ug/L)
Acetone*	ND
Bromobenzene	ND
Bromochloromethane	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
2-Butanone	ND
N-Butylbenzene	ND
Sec-Butylbenzene	ND
Tert-Butylbenzene	ND
Chloroethane	ND
Chloroform	1.57
Chloromethane	ND
2-Chlorotoluene	ND
4-Chlorotoluene	ND
Dibromochloromethane	ND
1,2-Dibromo-3-Chloropropane	ND
1,2-Dibromoethane	ND
Dibromomethane	ND
1,3-Dichlorobenzene	ND
Dichlorodifluoromethane	ND
1,1-Dichloroethane	ND
1,3-Dichloropropane	ND
2,2-Dichloropropane	ND
1,1-Dichloropropene	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Hexachlorobutadiene	ND
Isopropylbenzene	ND
P-Isopropyltoluene	ND
Methyl-tert-butyl ether	ND
Naphthalene	ND
N-Propylbenzene	ND
1,1,1,2-Tetrachloroethane	ND
1,1,2,2-Tetrachloroethane	ND
1,2,3-Trichlorobenzene	ND
Trichlorofluoromethane	ND
1,2,3-Trichloropropane	ND
1,2,4-Trimethylbenzene	ND
1,3,5-Trimethylbenzene	ND

Surrogate Standard Recoveries	%
Benzene-d6	101
4-Bromofluorobenzene	95
1,2-Dichlorobenzene-d4	102

MCL TTHM's = 80 ug/L
Method Detection Limit = 0.5 ug/L
Analysis performed per 310CMR42

Electronically signed and approved by Mr. Bruce A. Bornstein, Lab Director Date: 11/10/2021

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, December 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:	*5S*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212645*	
Date Received:	*11/08/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
5S A	12:20	11/08/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.94	0.01	11/09/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	11/09/21	SD	EPA 300.0
Total Nitrogen	mg/L	1.22	NA	11/17/21	MS/KB	Calculation
Total Dissolved Solids	mg/L	260	6.0	11/12/21	KB	SM 2540 C
Total Organic Carbon*	mg/L	0.628	0.017	11/11/21	NEC*	SM 5310 C
Volatile Organic Compounds*	ug/L	See attached	*	11/09/21	NEC*	*
Total Iron	mg/L	0.87	0.01	11/29/21	KB	EPA 200.7
Boron	mg/L	BRL	0.010	11/29/21	KB	EPA 200.7
Copper	mg/L	BRL	0.003	11/29/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	0.28	0.2	11/16/21	MS/KB	SM4500-Norg B-C
Chloride	mg/L	140	3.0	11/09/21	SD	EPA 300.0
Mercury*	mg/L	BRL	0.0005	11/16/21	RIA*	EPA 245.1
Total Phosphorous (P)	mg/L	0.231	0.005	11/28/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	11/16/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.386	0.017	11/11/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.94	NA	11/17/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.20	NA	11/17/21	KB	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	11/11/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	0.242	NA	11/16/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.28	NA	11/17/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.94	NA	11/17/21	MS/KB	Calculation
Ammonia-N	mg/L	BRL	0.02	11/11/21	CLM	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, December 30, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Groundwater Eel River*	***Comments:***
Project Number:	*5S*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212645*	
Date Received:	*11/08/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
5S A	12:20	11/08/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

*Trace to low levels of chloroform are occasionally detected in ground water in coastline areas.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari

Ronald J. Saari
Laboratory Director

New England Chromachem
6 Nichols Street
Salem, MA 01970
978-744-6600

Sample Information

EPA Method 524.2 Rev 4.1 Volatile Organic Compounds in Water	
Lab ID:	111241
Client:	Envirotech Laboratory, Inc.
Client ID:	WW-212645
State:	Liquid
Date Sampled:	11/03/21
Date Received:	11/09/21
Date Analyzed:	11/09/21

Regulated VOC's	Results (ug/L)	MCL (ug/L)
Benzene	ND	5
Carbon Tetrachloride	ND	5
1,1-Dichloroethene	ND	7
1,2-Dichloroethane	ND	5
1,2-Dichlorobenzene	ND	600
1,4-Dichlorobenzene	ND	5
Trichloroethene	ND	5
1,1,1-Trichloroethane	ND	200
Vinyl Chloride	ND	2
Chlorobenzene	ND	100
cis-1,2-dichloroethene	ND	70
trans-1,2-dichloroethene	ND	100
1,2-Dichloropropane	ND	5
Ethylbenzene	ND	700
Styrene	ND	100
Tetrachloroethene	ND	5
Toluene	ND	1000
Xylenes(Total)	ND	10000
Methylene Chloride	ND	5
1,2,4-Trichlorobenzene	ND	70
1,1,2-Trichloroethane	ND	5

* Acetone Detection Limit = 10 ug/L
ND = < Method Detection Limit
NA = Not Analyzed
MRL = 0.5 ug/L
Dilution Factor = 1

Unregulated VOC's	Results (ug/L)
Acetone*	ND
Bromobenzene	ND
Bromochloromethane	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
2-Butanone	ND
N-Butylbenzene	ND
Sec-Butylbenzene	ND
Tert-Butylbenzene	ND
Chloroethane	ND
Chloroform	1.34
Chloromethane	ND
2-Chlorotoluene	ND
4-Chlorotoluene	ND
Dibromochloromethane	ND
1,2-Dibromo-3-Chloropropane	ND
1,2-Dibromoethane	ND
Dibromomethane	ND
1,3-Dichlorobenzene	ND
Dichlorodifluoromethane	ND
1,1-Dichloroethane	ND
1,3-Dichloropropane	ND
2,2-Dichloropropane	ND
1,1-Dichloropropene	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Hexachlorobutadiene	ND
Isopropylbenzene	ND
P-Isopropyltoluene	ND
Methyl-tert-butyl ether	ND
Naphthalene	ND
N-Propylbenzene	ND
1,1,1,2-Tetrachloroethane	ND
1,1,2,2-Tetrachloroethane	ND
1,2,3-Trichlorobenzene	ND
Trichlorofluoromethane	ND
1,2,3-Trichloropropane	ND
1,2,4-Trimethylbenzene	ND
1,3,5-Trimethylbenzene	ND

Surrogate Standard Recoveries	%
Benzene-d6	100
4-Bromofluorobenzene	98
1,2-Dichlorobenzene-d4	105

MCL TTHM's = 80 ug/L
Method Detection Limit = 0.5 ug/L
Analysis performed per 310CMR42

Electronically signed and approved by Mr. Bruce A. Bornstein, Lab Director Date: 11/10/2021

New England ChromaChem
6 Nichols Street
Salem, MA 01970
978-744-6600

MA DEP Lab. M-MA072 RI Lab. LAO00364

Client: Envirotech Laboratory, Inc.
State: Liquid

			Analytical Results									
Lab ID	**Client ID**	**Date Sampled**	**TOC mg/L**									
111307	WW-212607 Total	11/03/21	1.25									
111308	WW-212607 Dissolved	11/03/21	1.04									
111309	WW-212608 Total	11/03/21	1.28									
111310	WW-212608 Dissolved	11/03/21	1.03									
111311	WW-212609 Total	11/03/21	0.170									
111312	WW-212609 Dissolved	11/03/21	0.125									
111313	WW-212618 Total	11/04/21	1.20									
111314	WW-212618 Dissolved	11/04/21	0.658									
111315	WW-212619 Total	11/04/21	1.86									
111316	WW-212619 Dissolved	11/04/21	1.68									
111317	WW-212620 Total	11/04/21	0.139									
111318	WW-212620 Dissolved	11/04/21	0.142									
111319	WW-212621 Total	11/04/21	0.284									
111320	WW-212621 Dissolved	11/04/21	0.269									
111321	WW-212644 Total	11/08/21	0.602									
111322	WW-212644 Dissolved	11/08/21	1.06									
111323	WW-212645A Total	11/08/21	0.628									
111324	WW-212645A Dissolved	11/08/21	0.515									
111325	WW-212645B Dissolved FILT. BLK	11/08/21	0.129									

Analytical Methodology							
Analyte	**Method**	**Detection Limit**	**MRL**	**Units**	**Date Analyzed**	**Cert Status**	DF
TOC	Standard Methods 5310C	0.0170	0.0850	mg/L	11/11/21	N	1

Form: Mis

Electronically signed and approved by: Bruce L. Bornstein Date: 11/12/21

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 11/11/2021
Date Reported: 11/17/2021
P.O. Number WW-212644.212645

Work Order #: 2111-19525

Project Name: PLYMOUTH ENV

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

R.I. Analytical Laboratories, Inc.

Laboratory Report

Envirotech Laboratories, Inc.
Work Order #: 2111-19525
Project Name: PLYMOUTH ENV

Sample Number: 001
Sample Description: WW-212644 A19
Sample Type : GRAB
Sample Date / Time : 11/08/2021 @ 12:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals						
Mercury	<0.00050	0.00050	mg/l	EPA 245.1	11/16/2021 16:06	BB
Mercury Digestion				EPA 245.1	11/16/2021 15:27	BB

Sample Number: 002
Sample Description: WW-212645 5S
Sample Type : GRAB
Sample Date / Time : 11/08/2021 @ 12:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals						
Mercury	<0.00050	0.00050	mg/l	EPA 245.1	11/16/2021 16:11	BB
Mercury Digestion				EPA 245.1	11/16/2021 15:27	BB

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Groundwater Eel River** -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
ww-212644 11/8/21	1220	A19	3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Plastic	Total Phosphorus and Ortho-phosphate (field filtered)	NONE
ww-212645 11/8/21	1250	~~A20~~ SS	3	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved, TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TOC	NONE
			1	250ml Plastic	Chloride, No2, NO3	NONE
			1	500ml Plastic	B, Cu, Hg, Fe	NONE
			1	Plastic	Total Phosphorus and Ortho-phosphate (field filtered)	NONE

NOTE: **Analysis needed for reporting in lowest detection possible**; Total Dissolved Solids,O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time
Kim Tow 11/8/21

Received By: Date/Time:
11/8/21 1400

SCANNED
DEC 30 2021

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, January 12, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Eel River SW Sampling*
Project Number:
Sampled By: *Kim Tower*
Lab Order Number: *WW-211143*
Date Received: *05/20/21*

Comments:

Sample Type S-8A A	***Sample Time*** 10:40	***Sample Date*** 05/20/21	***Comments***			
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.18	0.01	05/20/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	05/20/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.74	NA	06/26/21	KB	Calculation
Total Organic Carbon*	mg/L	2.30	0.017	05/20/21	NEC*	SM 5310 C
Boron	mg/L	0.018	0.010	05/31/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	0.56	0.2	06/13/21	KB	SM4500-Norg B-C
TDS-grab	mg/L	113	6.0	05/29/21	AMB	SM 2540 C
Chloride	mg/L	51	3.0	05/20/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.058	0.005	06/10/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.22	0.20	06/13/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	1.34	0.017	05/20/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.35	NA	08/01/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.05	NA	08/01/21	KB	Calculation
Chlorophyll-a	*	20.4	*	05/24/21	Alpha*	*
Particulate Organic Carbon	mg/L	0.960	NA	08/01/21	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.34	NA	08/01/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.40	NA	08/01/21	KB	Calculation
E coli	CFU/100mL	4	<1	05/20/21	NB @ 15:00	EPA 1603
Ammonia-N	mg/L	0.17	0.02	07/05/21	CLM	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	BRL	0.005	05/21/21	TM/KB	10-115-01-1-A

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: R Ronald Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, January 12, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211143*	
Date Received:	*05/20/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-8A A	10:40	05/20/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

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Wednesday, January 12, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Eel River SW Sampling* ***Comments:***
Project Number:
Sampled By: *Kim Tower*
Lab Order Number: *WW-211144*
Date Received: *05/20/21*

Sample Type S-5B A	***Sample Time*** 10:50	***Sample Date*** 05/20/21	***Comments***			
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.16	0.01	05/20/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	05/20/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.60	NA	06/26/21	KB	Calculation
Total Organic Carbon*	mg/L	2.33	0.017	05/20/21	NEC*	SM 5310 C
Boron	mg/L	0.016	0.010	05/31/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	0.44	0.2	06/13/21	KB	SM4500-Norg B-C
TDS-grab	mg/L	104	6.0	05/29/21	AMB	SM 2540 C
Chloride	mg/L	52	3.0	05/20/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.055	0.005	06/10/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.22	0.20	06/13/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	1.35	0.017	05/20/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.34	NA	08/01/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.04	NA	08/01/21	KB	Calculation
Chlorophyll-a	*	18.9	*	05/24/21	Alpha*	*
Particulate Organic Carbon	mg/L	0.980	NA	08/01/21	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.22	NA	08/01/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.38	NA	08/01/21	KB	Calculation
E coli	CFU/100mL	3	<1	05/20/21	NB @ 15:00	EPA 1603
Ammonia-N	mg/L	0.18	0.02	07/05/21	CLM	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	BRL	0.005	05/21/21	TM/KB	10-115-01-1-A

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8 Jan Sebastian Drive
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(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, January 12, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211144*	
Date Received:	*05/20/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-5B A	10:50	05/20/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

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FAX (508)888-6446

Wednesday, January 12, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Eel River SW Sampling*
Project Number:
Sampled By: *Kim Tower*
Lab Order Number: *WW-211145*
Date Received: *05/20/21*

Comments:

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-4A A	11:00	05/20/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.09	0.01	05/20/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	05/20/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.37	NA	06/26/21	KB	Calculation
Total Organic Carbon*	mg/L	2.88	0.017	05/20/21	NEC*	SM 5310 C
Boron	mg/L	BRL	0.010	05/31/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	0.28	0.2	06/13/21	KB	SM4500-Norg B-C
TDS-grab	mg/L	74	6.0	05/29/21	AMB	SM 2540 C
Chloride	mg/L	36	3.0	05/20/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.033	0.005	06/10/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.26	0.20	06/13/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	1.85	0.017	05/20/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.16	NA	08/01/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.19	NA	08/01/21	KB	Calculation
Chlorophyll-a	*	2.48	*	05/24/21	Alpha*	*
Particulate Organic Carbon	mg/L	1.03	NA	08/01/21	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.02	NA	08/01/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.35	NA	08/01/21	KB	Calculation
E coli	CFU/100mL	9	<1	05/20/21	NB @ 15:00	EPA 1603
Ammonia-N	mg/L	0.07	0.02	07/05/21	CLM	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	BRL	0.005	05/21/21	TM/KB	10-115-01-1-A

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FAX (508)888-6446

Wednesday, January 12, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211145*	
Date Received:	*05/20/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-4A A	11:00	05/20/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

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FAX (508)888-6446

Wednesday, January 12, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211146*	
Date Received:	*05/20/21*	

Sample Type S-8B A	***Sample Time*** 11:10	***Sample Date*** 05/20/21	***Comments***			
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.20	0.01	05/21/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	05/21/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.52	NA	06/26/21	KB	Calculation
Total Organic Carbon*	mg/L	2.88	0.017	05/20/21	NEC*	SM 5310 C
Boron	mg/L	BRL	0.010	05/31/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	0.32	0.2	06/13/21	KB	SM4500-Norg B-C
TDS-grab	mg/L	76	6.0	05/29/21	AMB	SM 2540 C
Chloride	mg/L	37	3.0	05/21/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.032	0.005	06/10/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	06/13/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	1.86	0.017	05/20/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.27	NA	08/01/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.13	NA	08/01/21	KB	Calculation
Chlorophyll-a	*	ND	*	05/24/21	Alpha*	*
Particulate Organic Carbon	mg/L	1.02	NA	08/01/21	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.32	NA	08/01/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	<0.40	NA	08/01/21	KB	Calculation
E coli	CFU/100mL	12	<1	05/20/21	NB @ 15:00	EPA 1603
Ammonia-N	mg/L	0.07	0.02	07/05/21	CLM	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	BRL	0.005	05/21/21	TM/KB	10-115-01-1-A

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8 Jan Sebastian Drive
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Wednesday, January 12, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211146*	
Date Received:	*05/20/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-8B A	11:10	05/20/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

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FAX (508)888-6446

Wednesday, January 12, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Eel River SW Sampling* ***Comments:***
Project Number:
Sampled By: *Kim Tower*
Lab Order Number: *WW-211147*
Date Received: *05/20/21*

Sample Type S-3A A	***Sample Time*** 11:25	***Sample Date*** 05/20/21	***Comments***			
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.22	0.01	05/21/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	05/21/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.53	NA	06/26/21	KB	Calculation
Total Organic Carbon*	mg/L	2.20	0.017	05/20/21	NEC*	SM 5310 C
Boron	mg/L	BRL	0.010	05/31/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	0.31	0.2	06/13/21	KB	SM4500-Norg B-C
TDS-grab	mg/L	71	6.0	05/29/21	AMB	SM 2540 C
Chloride	mg/L	34	3.0	05/21/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.033	0.005	06/10/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	06/13/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.992	0.017	05/20/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.35	NA	08/01/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.07	NA	08/01/21	KB	Calculation
Chlorophyll-a	*	13.3	*	05/24/21	Alpha*	*
Particulate Organic Carbon	mg/L	1.21	NA	08/01/21	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.31	NA	08/01/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	<0.42	NA	08/01/21	KB	Calculation
E coli	CFU/100mL	13	<1	05/20/21	NB @ 15:00	EPA 1603
Ammonia-N	mg/L	0.13	0.02	07/05/21	CLM	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	0.005	0.005	05/21/21	TM/KB	10-115-01-1-A

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FAX (508)888-6446

Wednesday, January 12, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211147*	
Date Received:	*05/20/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-3A A	11:25	05/20/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

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FAX (508)888-6446

Thursday, January 13, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211148*	
Date Received:	*05/20/21*	

Sample Type S-2C A	***Sample Time*** 11:40	***Sample Date*** 05/20/21	***Comments***			
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.08	0.01	05/21/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	05/21/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.48	NA	06/26/21	KB	Calculation
Total Organic Carbon*	mg/L	2.62	0.017	05/20/21	NEC*	SM 5310 C
Boron	mg/L	BRL	0.010	05/31/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	0.40	0.2	06/13/21	KB	SM4500-Norg B-C
TDS-grab	mg/L	59	6.0	05/29/21	AMB	SM 2540 C
Chloride	mg/L	29	3.0	05/21/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.032	0.005	06/10/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.35	0.20	06/13/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	1.20	0.017	05/20/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.22	NA	08/01/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.21	NA	08/01/21	KB	Calculation
Chlorophyll-a	*	23.5	*	05/24/21	Alpha*	*
Particulate Organic Carbon	mg/L	1.42	NA	08/01/21	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.05	NA	08/01/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.43	NA	08/01/21	KB	Calculation
E coli	CFU/100mL	0	<1	05/20/21	NB @ 15:00	EPA 1603
Ammonia-N	mg/L	0.14	0.02	07/15/21	CLM	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	BRL	0.005	05/21/21	TM/KB	10-115-01-1-A

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Thursday, January 13, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211148*	
Date Received:	*05/20/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-2C A	11:40	05/20/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

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K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Eel River SW Sampling*
Project Number:
Sampled By: *Kim Tower*
Lab Order Number: *WW-211149*
Date Received: *05/20/21*

Comments:

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-6A A	12:00	05/20/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.30	0.01	05/21/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	05/21/21	SD	EPA 300.0
Total Nitrogen	mg/L	2.4	NA	06/26/21	KB	Calculation
Total Organic Carbon*	mg/L	1.71	0.017	05/20/21	NEC*	SM 5310 C
Boron	mg/L	BRL	0.010	05/31/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	2.1	0.2	06/13/21	KB	SM4500-Norg B-C
TDS-grab	mg/L	53	6.0	05/29/21	AMB	SM 2540 C
Chloride	mg/L	20	3.0	05/21/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.027	0.005	06/10/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	06/13/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.952	0.017	05/20/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	1.24	NA	08/01/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	BRL	NA	08/01/21	KB	Calculation
Chlorophyll-a	*	2.10	*	05/24/21	Alpha*	*
Particulate Organic Carbon	mg/L	0.758	NA	08/01/21	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	<2.10	NA	08/01/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	<0.50	NA	08/01/21	KB	Calculation
E coli	CFU/100mL	14	<1	05/20/21	NB @ 15:00	EPA 1603
Ammonia-N	mg/L	0.94	0.02	07/05/19	CLM	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	0.006	0.005	05/21/21	TM/KB	10-115-01-1-A

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Wednesday, January 12, 2022

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K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211149*	
Date Received:	*05/20/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-6A A	12:00	05/20/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, January 12, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Eel River SW Sampling* ***Comments:***
Project Number:
Sampled By: *Kim Tower*
Lab Order Number: *WW-211150*
Date Received: *05/20/21*

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-12 A	12:15	05/20/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.33	0.01	05/21/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	05/21/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.77	NA	06/26/21	KB	Calculation
Total Organic Carbon*	mg/L	2.34	0.017	05/20/21	NEC*	SM 5310 C
Boron	mg/L	BRL	0.010	05/31/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	0.44	0.2	06/15/21	KB	SM4500-Norg B-C
TDS-grab	mg/L	44	6.0	05/29/21	AMB	SM 2540 C
Chloride	mg/L	19	3.0	05/21/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.035	0.005	06/10/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.20	0.20	06/15/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	1.31	0.017	05/20/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.48	NA	08/01/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.05	NA	08/01/21	KB	Calculation
Chlorophyll-a	*	3.83	*	05/24/21	Alpha*	*
Particulate Organic Carbon	mg/L	1.03	NA	08/01/21	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.24	NA	08/01/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.53	NA	08/01/21	KB	Calculation
E coli	CFU/100mL	16	<1	05/20/21	NB @ 15:00	EPA 1603
Ammonia-N	mg/L	0.15	0.02	07/05/21	CLM	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	BRL	0.005	05/21/21	TM/KB	10-115-01-1-A

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari
Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, January 12, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211150*	
Date Received:	*05/20/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-12 A	12:15	05/20/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari
Ronald J. Saari
Laboratory Director

New England ChromaChem
6 Nichols Street
Salem, MA 01970
978-744-6600

MA DEP Lab. M-MA072 RI Lab. LAO00364

Client: Envirotech Laboratory, Inc.
State: Liquid

			Analytical Results									
Lab ID	**Client ID**	**Date Sampled**	**TOC mg/L**									
105483	WW-211143 Total	05/20/21	2.30									
105484	WW-211143 Dissolved	05/20/21	1.52									
105485	WW-211144 Total	05/20/21	2.33									
105486	WW-211144 Dissolved	05/20/21	1.53									
105487	WW-211145 Total	05/20/21	2.88									
105488	WW-211145 Dissolved	05/20/21	2.03									
105489	WW-211146 Total	05/20/21	2.88									
105490	WW-211146 Dissolved	05/20/21	2.04									
105491	WW-211147 Total	05/20/21	2.20									
105492	WW-211147 Dissolved	05/20/21	1.17									
105493	WW-211148 Total	05/20/21	2.62									
105494	WW-211148 Dissolved	05/20/21	1.38									
105495	WW-211149 Total	05/20/21	1.71									
105496	WW-211149 Dissolved	05/20/21	1.13									
105497	WW-211150A Total	05/20/21	2.34									
105498	WW-211150A Dissolved	05/20/21	1.49									
105499	WW-211150B Dissolved	05/20/21	0.178									

Analytical Methodology

Analyte	**Method**	**Detection Limit**	**PQL**	**Units**	**Date Analyzed**	**Cert Status**
TOC	Standard Methods 5310C	0.0170	0.0850	mg/L	05/27/21	NA

Form: Mis

Electronically signed and approved by: Brian L. Barnstein Date: 05/28/21

ANALYTICAL REPORT

Lab Number:	L2126919
Client:	Envirotech Laboratories, Inc. 8 Jan Sebastian Drive Unit 12 Sandwich, MA 02563
ATTN:	Ron Saari
Phone:	(800) 339-6460
Project Name:	PLYMOUTH ENVIRONMENTAL MGMNT
Project Number:	Not Specified
Report Date:	06/08/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name:	PLYMOUTH ENVIRONMENTAL MGMNT	**Lab Number:**	L2126919
Project Number:	Not Specified	**Report Date:**	06/08/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2126919-01	WW-211143	WATER	Not Specified	05/20/21 10:40	05/21/21
L2126919-02	WW-211144	WATER	Not Specified	05/20/21 10:50	05/21/21
L2126919-03	WW-211145	WATER	Not Specified	05/20/21 11:00	05/21/21
L2126919-04	WW-211146	WATER	Not Specified	05/20/21 11:10	05/21/21
L2126919-05	WW-211147	WATER	Not Specified	05/20/21 11:25	05/21/21
L2126919-06	WW-211148	WATER	Not Specified	05/20/21 11:40	05/21/21
L2126919-07	WW-211149	WATER	Not Specified	05/20/21 12:00	05/21/21
L2126919-08	WW-211150	WATER	Not Specified	05/20/21 12:15	05/21/21

Project Name:	PLYMOUTH ENVIRONMENTAL MGMNT	**Lab Number:**	L2126919
Project Number:	Not Specified	**Report Date:**	06/08/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L2126919
Report Date: 06/08/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Chlorophyll A

L2126919-01 through -08 were filtered with the method required holding time exceeded.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly Stenstrom

Title: Technical Director/Representative

Date: 06/08/21

INORGANICS
&
MISCELLANEOUS

Project Name:	PLYMOUTH ENVIRONMENTAL MGMNT	**Lab Number:**	L2126919
Project Number:	Not Specified	**Report Date:**	06/08/21

SAMPLE RESULTS

Lab ID:	L2126919-01	Date Collected:	05/20/21 10:40
Client ID:	WW-211143	Date Received:	05/21/21
Sample Location:	Not Specified	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	20.4		mg/m3	2.00	NA	1	05/21/21 21:00	05/24/21 09:05	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L2126919
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2126919-02
Client ID: WW-211144
Sample Location: Not Specified

Date Collected: 05/20/21 10:50
Date Received: 05/21/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	18.9		mg/m3	2.00	NA	1	05/21/21 21:00	05/24/21 09:05	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L2126919
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2126919-03
Client ID: WW-211145
Sample Location: Not Specified

Date Collected: 05/20/21 11:00
Date Received: 05/21/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	2.48		mg/m3	2.00	NA	1	05/21/21 21:00	05/24/21 09:05	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L2126919
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2126919-04
Client ID: WW-211146
Sample Location: Not Specified

Sample Depth:
Matrix: Water

Date Collected: 05/20/21 11:10
Date Received: 05/21/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	ND		mg/m3	2.00	NA	1	05/21/21 21:00	05/24/21 09:05	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L2126919
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2126919-05
Client ID: WW-211147
Sample Location: Not Specified

Date Collected: 05/20/21 11:25
Date Received: 05/21/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	13.3		mg/m3	2.00	NA	1	05/21/21 21:00	05/24/21 09:05	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L2126919
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2126919-06
Client ID: WW-211148
Sample Location: Not Specified

Date Collected: 05/20/21 11:40
Date Received: 05/21/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	23.5		mg/m3	2.00	NA	1	05/21/21 21:00	05/24/21 09:05	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L2126919
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2126919-07
Client ID: WW-211149
Sample Location: Not Specified

Date Collected: 05/20/21 12:00
Date Received: 05/21/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	2.10		mg/m3	2.00	NA	1	05/21/21 21:00	05/24/21 09:05	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L2126919
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2126919-08
Client ID: WW-211150
Sample Location: Not Specified

Date Collected: 05/20/21 12:15
Date Received: 05/21/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	3.83		mg/m3	2.00	NA	1	05/21/21 21:00	05/24/21 09:05	121,10200H	MT

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-08 Batch: WG1502555-1										
Chlorophyll A	ND		mg/m3	2.00	NA	1	05/21/21 21:00	05/24/21 09:05	121,10200H	MT

Lab Duplicate Analysis

Batch Quality Control

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L2126919
Report Date: 06/08/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-08 QC Batch ID: WG1502555-2 QC Sample: L2126919-01 Client ID: WW-211143						
Chlorophyll A	20.4	20.8	mg/m3	2		35

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
A	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2126919-01A	Brown Plastic 1000ml unpreserved	A	NA		4.3	Y	Absent		CHLORO-A(1)
L2126919-01B	Brown Plastic 1000ml unpreserved	A	NA		4.3	Y	Absent		CHLORO-A(1)
L2126919-02A	Brown Plastic 1000ml unpreserved	A	NA		4.3	Y	Absent		CHLORO-A(1)
L2126919-02B	Brown Plastic 1000ml unpreserved	A	NA		4.3	Y	Absent		CHLORO-A(1)
L2126919-03A	Brown Plastic 1000ml unpreserved	A	NA		4.3	Y	Absent		CHLORO-A(1)
L2126919-03B	Brown Plastic 1000ml unpreserved	A	NA		4.3	Y	Absent		CHLORO-A(1)
L2126919-04A	Brown Plastic 1000ml unpreserved	A	NA		4.3	Y	Absent		CHLORO-A(1)
L2126919-04B	Brown Plastic 1000ml unpreserved	A	NA		4.3	Y	Absent		CHLORO-A(1)
L2126919-05A	Brown Plastic 1000ml unpreserved	A	NA		4.3	Y	Absent		CHLORO-A(1)
L2126919-05B	Brown Plastic 1000ml unpreserved	A	NA		4.3	Y	Absent		CHLORO-A(1)
L2126919-06A	Brown Plastic 1000ml unpreserved	A	NA		4.3	Y	Absent		CHLORO-A(1)
L2126919-06B	Brown Plastic 1000ml unpreserved	A	NA		4.3	Y	Absent		CHLORO-A(1)
L2126919-07A	Brown Plastic 1000ml unpreserved	A	NA		4.3	Y	Absent		CHLORO-A(1)
L2126919-07B	Brown Plastic 1000ml unpreserved	A	NA		4.3	Y	Absent		CHLORO-A(1)
L2126919-08A	Brown Plastic 1000ml unpreserved	A	NA		4.3	Y	Absent		CHLORO-A(1)
L2126919-08B	Brown Plastic 1000ml unpreserved	A	NA		4.3	Y	Absent		CHLORO-A(1)

*Values in parentheses indicate holding time in days

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	PLYMOUTH ENVIRONMENTAL MGMNT	**Lab Number:**	L2126919
Project Number:	Not Specified	**Report Date:**	06/08/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

REFERENCES

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

SCANNED
MAY 20 2021

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Eel River SW Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
WW-211143 5/20/21	1040	S-8A	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	NONE
			1	Glass	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	NONE
			1	100mL Plastic	Bacteria	NONE e-coli 4 1500 ND
			2	Amber plastic	Chlorophyll-a	NONE
WW-211144 5/20/21	1050	S-5B	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS, diss TDS	NONE
			1	1 Liter Plastic	TKN, NH3, TN,TP, TOC	NONE
			1	Glass	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	NONE
			1	100mL Plastic	Bacteria	NONE e-coli 3
			2	Amber plastic	Chlorophyll-a	NONE

Relinquished By:	Date/Time	Received By:	Date/Time:
Kim Tw	5/20/21 1253	E Fonseca	5/20/21 12:53pm

SCANNED
MAY 20 2021

LOM

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Eel River SW Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative	
WW-211145 5/20/21	1100	S-4A	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS	NONE	
			1	1 Liter Plastic	TKN, TN,TP, TOC	NONE	
			1	Glass	Orthophosphate	NONE	
			1	500mL Plastic	NO3, NO2, Chloride	NONE	
			1	250mL	Boron	NONE	
			1	100mL Plastic	Bacteria	NONE	e-coli 9
			2	Amber plastic	Chlorophyll-a	NONE	
WW-211146 5/20/21	S-8B	1110	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS, diss TDS	NONE	
			1	1 Liter Plastic	TKN, NH3, TN,TP, TOC	NONE	
			1	Glass	Orthophosphate	NONE	
			1	500mL Plastic	NO3, NO2, Chloride	NONE	
			1	250mL	Boron	NONE	
			1	100mL Plastic	Bacteria	NONE	e-coli 12
			2	Amber plastic	Chlorophyll-a	NONE	

Relinquished By: Date/Time
5/20/21 @ 1253

Received By: Date/Time:
ESonseca 5/20/21 12:53pm

SCANNED
MAY 20 2021

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Eel River SW Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative	
5/20/21	1125	S-3A	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS	NONE	WW-211147
			1	1 Liter Plastic	TKN, TN, TP, TOC	NONE	
			1	Glass	Orthophosphate	NONE	
			1	500mL Plastic	NO3, NO2, Chloride	NONE	
			1	250mL	Boron	NONE	
			1	100mL Plastic	Bacteria	NONE	e-coli 13
			2	Amber plastic	Chlorophyll-a	NONE	
5/20/21	1140	S-2C	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS, diss TDS	NONE	WW-211148
			1	1 Liter Plastic	TKN, NH3, TN, TP, TOC	NONE	
			1	Glass	Orthophosphate	NONE	
			1	500mL Plastic	NO3, NO2, Chloride	NONE	
			1	250mL	Boron	NONE	
			1	100mL Plastic	Bacteria	NONE	e-coli 0
			2	Amber plastic	Chlorophyll-a	NONE	

Relinquished By: Date/Time
Kim Tower 5/20/21 1253

Received By: Date/Time:
E Fonseca 5/20/21 12:53pm

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MAY 20 2021

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Eel River SW Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
WW-211149 5/20/21	1200	S-6A	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	NONE
			1	Glass	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	NONE
			1	100mL Plastic	Bacteria	NONE e-coli 14
			2	Amber plastic	Chlorophyll-a	NONE
WW-211150 5/20/21	1215	S-12	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS, diss TDS	NONE
			1	1 Liter Plastic	TKN, NH3, TN,TP, TOC	NONE
			1	Glass	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	NONE
			1	100mL Plastic	Bacteria	NONE e-coli 16
			2	Amber plastic	Chlorophyll-a	NONE

Relinquished By: Date/Time
Kim Tower 5/20/21 1253

Received By: Date/Time:
Ed Sleeper 5/20/21 17:53pm

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Sunday, January 23, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211678*	
Date Received:	*07/22/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-5B A	11:00	07/22/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Kjeldhal Nitrogen	mg/L	0.63	0.60	07/27/21	KB	SM4500-Norg B-C
Nitrate-N	mg/L	0.10	0.01	07/24/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	07/24/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.73	NA	08/09/21	KB	Calculation
Total Dissolved Solids	mg/L	290	6.0	08/10/21	KB	SM 2540 C
Total Organic Carbon*	mg/L	1.78	0.017	08/06/21	NEC*	SM 5310 C
Boron	mg/L	0.031	0.010	08/09/21	KB	EPA 200.7
Chloride	mg/L	150	3.0	07/24/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.130	0.005	08/01/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.55	0.20	07/27/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	1.24	0.017	08/06/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.15	NA	09/09/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.50	NA	09/09/21	KB	Calculation
Chlorophyll-a	*	12.9	*	07/26/21	Alpha*	*
Particulate Organic Carbon	mg/L	0.540	NA	08/06/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.08	NA	08/27/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.65	NA	08/09/21	KB	Calculation
E coli	CFU/100mL	55	<1	07/22/21	NB @ 16:00	EPA 1603
Ammonia-N	mg/L	0.05	0.02	08/19/21	KB	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	0.135	0.005	07/22/21	CLM	10-115-01-1-A

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Sunday, January 23, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211678*	
Date Received:	*07/22/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-5B A	11:00	07/22/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

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By: Ronald Saari

Ronald J. Saari
Laboratory Director

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MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, January 24, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211679*	
Date Received:	*07/22/21*	

Sample Type S-8A A	***Sample Time*** 11:10	***Sample Date*** 07/22/21	***Comments***			
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Kjeldhal Nitrogen	mg/L	0.55	0.60	07/27/21	KB	SM4500-Norg B-C
Nitrate-N	mg/L	0.11	0.01	07/23/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	07/23/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.66	NA	08/09/21	KB	Calculation
Total Dissolved Solids	mg/L	284	6.0	08/10/21	KB	SM 2540 C
Total Organic Carbon*	mg/L	1.84	0.017	08/06/21	NEC*	SM 5310 C
Boron	mg/L	0.031	0.010	08/09/21	KB	EPA 200.7
Chloride	mg/L	140	3.0	07/23/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.152	0.005	08/01/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.51	0.20	07/27/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	1.25	0.017	08/06/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.11	NA	09/09/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.51	NA	09/09/21	KB	Calculation
Chlorophyll-a	*	13.3	*	07/26/21	Alpha*	*
Particulate Organic Carbon	mg/L	0.590	NA	08/09/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.04	NA	08/27/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.62	NA	08/09/21	KB	Calculation
E coli	CFU/100mL	55	<1	07/22/21	NB @ 16:00	EPA 1603
Ammonia-N	mg/L	BRL	0.02	08/19/21	KB	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	0.135	0.005	07/22/21	CLM	10-115-01-1-A

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

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****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, January 24, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211679*	
Date Received:	*07/22/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-8A A	11:10	07/22/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

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Ronald J. Saari
Laboratory Director

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MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Sunday, January 23, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211680*	
Date Received:	*07/22/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-4B A	11:20	07/22/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Kjeldhal Nitrogen	mg/L	0.55	0.60	07/27/21	KB	SM4500-Norg B-C
Nitrate-N	mg/L	0.08	0.01	07/24/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	07/24/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.63	NA	08/09/21	KB	Calculation
Total Organic Carbon*	mg/L	4.42	0.017	08/06/21	NEC*	SM 5310 C
Boron	mg/L	0.007	0.010	08/09/21	KB	EPA 200.7
Chloride	mg/L	36	3.0	07/24/21	SD	EPA 300.0
TDS calculated	mg/L	91	5.0	08/10/21	KB	EPA 120.1
Total Phosphorous (P)	mg/L	0.139	0.005	08/01/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.41	0.20	07/27/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	3.54	0.017	08/06/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.08	NA	09/09/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.41	NA	09/09/21	KB	Calculation
Chlorophyll-a	*	3.36	*	07/26/21	Alpha*	*
Particulate Organic Carbon	mg/L	0.880	NA	08/09/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.14	NA	08/27/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.49	NA	08/09/21	KB	Calculation
E coli	CFU/100mL	200	<1	07/22/21	NB @ 16:00	EPA 1603
Ammonia-N	mg/L	BRL	0.02	08/19/21	KB	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	0.128	0.005	07/22/21	CLM	10-115-01-1-A

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Sunday, January 23, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211680*	
Date Received:	*07/22/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-4B A	11:20	07/22/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, January 24, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Eel River SW Sampling* ***Comments:***
Project Number:
Sampled By: *Kim Tower*
Lab Order Number: *WW-211681*
Date Received: *07/22/21*

Sample Type	Sample Time	Sample Date	Comments			
S-8B A	11:30	07/22/21				
Parameters	**Units**	**Test Results**	**Reportable Limits**	**Date Analyzed**	**Analyst**	**Method**
Kjeldhal Nitrogen	mg/L	0.49	0.60	07/27/21	KB	SM4500-Norg B-C
Nitrate-N	mg/L	0.08	0.01	07/24/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	07/24/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.57	NA	08/09/21	KB	Calculation
Total Dissolved Solids	mg/L	91	6.0	08/10/21	KB	SM 2540 C
Total Organic Carbon*	mg/L	4.52	0.017	08/06/21	NEC*	SM 5310 C
Boron	mg/L	0.007	0.010	08/09/21	KB	EPA 200.7
Chloride	mg/L	36	3.0	07/24/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.136	0.005	08/01/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.44	0.20	07/27/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	3.41	0.017	08/06/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.08	NA	09/09/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.44	NA	09/09/21	KB	Calculation
Chlorophyll-a	*	4.58	*	07/26/21	Alpha*	*
Particulate Organic Carbon	mg/L	1.11	NA	08/09/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.05	NA	08/27/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.52	NA	08/09/21	KB	Calculation
E coli	CFU/100mL	260	<1	07/22/21	NB @ 16:00	EPA 1603
Ammonia-N	mg/L	BRL	0.02	08/19/21	KB	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	0.127	0.005	07/22/21	CLM	10-115-01-1-A

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: *Ronald J. Saari*
Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, January 24, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	**Comments:**
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211681*	
Date Received:	*07/22/21*	

Sample Type	Sample Time	Sample Date	Comments			
S-8B A	11:30	07/22/21				
Parameters	**Units**	**Test Results**	**Reportable Limits**	**Date Analyzed**	**Analyst**	**Method**

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

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**see attached*

By: Ronald J. Saari
Ronald J. Saari
Laboratory Director

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FAX (508)888-6446

Monday, January 24, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Eel River SW Sampling* ***Comments:***
Project Number:
Sampled By: *Kim Tower*
Lab Order Number: *WW-211682*
Date Received: *07/22/21*

Sample Type	*Sample Time*	*Sample Date*	*Comments*			
S-3A A	11:45	07/22/21				
Parameters	*Units*	*Test Results*	*Reportable Limits*	*Date Analyzed*	*Analyst*	*Method*
Kjeldhal Nitrogen	mg/L	0.44	0.60	07/29/21	KB	SM4500-Norg B-C
Nitrate-N	mg/L	0.11	0.01	07/24/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	07/24/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.55	NA	08/12/21	KB	Calculation
Total Dissolved Solids	mg/L	81	6.0	08/10/21	KB	SM 2540 C
Total Organic Carbon*	mg/L	1.90	0.017	08/06/21	NEC*	SM 5310 C
Boron	mg/L	0.007	0.010	08/09/21	KB	EPA 200.7
Chloride	mg/L	32	3.0	07/24/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.123	0.005	08/01/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.38	0.20	07/29/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.99	0.017	08/06/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.11	NA	09/09/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.38	NA	09/09/21	KB	Calculation
Chlorophyll-a	*	5.43	*	07/26/21	Alpha*	*
Particulate Organic Carbon	mg/L	0.910	NA	08/09/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.06	NA	08/27/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.49	NA	08/09/21	KB	Calculation
E coli	CFU/100mL	40	<1	07/22/21	NB @ 16:00	EPA 1603
Ammonia-N	mg/L	BRL	0.02	08/19/21	KB	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	0.122	0.005	07/22/21	CLM	10-115-01-1-A

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BRL=below reportable limits

****see attached***

By: *Ronald J. Saari*
Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, January 24, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211682*	
Date Received:	*07/22/21*	

Sample Type S-3A A	*Sample Time* 11:45	*Sample Date* 07/22/21	*Comments*			
Parameters	*Units*	*Test Results*	*Reportable Limits*	*Date Analyzed*	*Analyst*	*Method*

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

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Ronald J. Saari
Laboratory Director

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FAX (508)888-6446

Monday, January 24, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211683*	
Date Received:	*07/22/21*	

Sample Type	*Sample Time*	*Sample Date*	*Comments*			
S-2C A	12:15	07/22/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Kjeldhal Nitrogen	mg/L	0.59	0.60	07/29/21	KB	SM4500-Norg B-C
Nitrate-N	mg/L	BRL	0.01	07/24/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	07/24/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.59	NA	08/12/21	KB	Calculation
Total Dissolved Solids	mg/L	78	6.0	08/10/21	KB	SM 2540 C
Total Organic Carbon*	mg/L	1.96	0.017	08/06/21	NEC*	SM 5310 C
Boron	mg/L	0.007	0.010	08/09/21	KB	EPA 200.7
Chloride	mg/L	29	3.0	07/24/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.112	0.005	08/01/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.42	0.20	07/29/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	1.02	0.017	08/06/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.08	NA	09/09/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.34	NA	09/09/21	KB	Calculation
Chlorophyll-a	*	10.2	*	07/26/21	Alpha*	*
Particulate Organic Carbon	mg/L	0.940	NA	08/09/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.17	NA	08/27/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.42	NA	08/09/21	KB	Calculation
E coli	CFU/100mL	10	<1	07/22/21	NB @ 16:00	EPA 1603
Ammonia-N	mg/L	0.08	0.02	08/19/21	KB	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	0.107	0.005	07/22/21	CLM	10-115-01-1-A

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We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

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Sandwich, MA 02563
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FAX (508)888-6446

Monday, January 24, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	**Comments:**
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211683*	
Date Received:	*07/22/21*	

Sample Type	Sample Time	Sample Date	Comments			
S-2C A	12:15	07/22/21				
Parameters	**Units**	**Test Results**	**Reportable Limits**	**Date Analyzed**	**Analyst**	**Method**

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By: Ronald Saari

Ronald J. Saari
Laboratory Director

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(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, January 24, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Eel River SW Sampling* ***Comments:***
Project Number:
Sampled By: *Kim Tower*
Lab Order Number: *WW-211684*
Date Received: *07/22/21*

Sample Type S-6A A	*Sample Time* 12:35	*Sample Date* 07/22/21	*Comments*			
Parameters	*Units*	*Test Results*	*Reportable Limits*	*Date Analyzed*	*Analyst*	*Method*
Kjeldhal Nitrogen	mg/L	0.47	0.60	07/29/21	KB	SM4500-Norg B-C
Nitrate-N	mg/L	0.16	0.01	07/24/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	07/24/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.63	NA	08/12/21	KB	Calculation
Total Dissolved Solids	mg/L	34	6.0	08/10/21	KB	SM 2540 C
Total Organic Carbon*	mg/L	2.31	0.017	08/06/21	NEC*	SM 5310 C
Boron	mg/L	0.006	0.010	08/09/21	KB	EPA 200.7
Chloride	mg/L	20	3.0	07/24/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.181	0.005	08/01/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.25	0.20	07/29/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	1.11	0.017	08/06/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.16	NA	09/09/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.25	NA	09/09/21	KB	Calculation
Chlorophyll-a	*	3.72	*	07/26/21	Alpha*	*
Particulate Organic Carbon	mg/L	1.20	NA	08/09/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.22	NA	08/27/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.41	NA	08/09/21	KB	Calculation
E coli	CFU/100mL	90	<1	07/22/21	NB @ 16:00	EPA 1603
Ammonia-N	mg/L	BRL	0.02	08/19/21	KB	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	0.175	0.005	07/22/21	CLM	10-115-01-1-A

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We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: R Ronald Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

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Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, January 24, 2022

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211684*	
Date Received:	*07/22/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-6A A	12:35	07/22/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari

Ronald J. Saari
Laboratory Director

New England ChromaChem
6 Nichols Street
Salem, MA 01970
978-744-6600

MA DEP Lab. M-MA072 RI Lab. LAO00364

Client: Envirotech Laboratory, Inc.
State: Liquid

			Analytical Results									
Lab ID	**Client ID**	**Date Sampled**	**TOC mg/L**									
108130	WW-211678 Total	07/22/21	1.78									
108131	WW-211678 Dissolved	07/22/21	1.62									
108132	WW-211679 Total	07/22/21	1.84									
108133	WW-211679 Dissolved	07/22/21	1.63									
108134	WW-211680 Total	07/22/21	4.42									
108135	WW-211680 Dissolved	07/22/21	3.92									
108136	WW-211681 Total	07/22/21	4.52									
108137	WW-211681 Dissolved	07/22/21	3.79									
108138	WW-211682 Total	07/22/21	1.90									
108139	WW-211682 Dissolved	07/22/21	1.37									
108140	WW-211683 Total	07/22/21	1.96									
108141	WW-211683 Dissolved	07/22/21	1.40									
108142	WW-211684A Total	07/22/21	2.31									
108143	WW-211684A Dissolved	07/22/21	1.49									
108144	WW-211684B Dissolved	07/22/21	0.381									

Analytical Methodology						
Analyte	**Method**	**Detection Limit**	**PQL**	**Units**	**Date Analyzed**	**Cert Status**
TOC	Standard Methods 5310C	0.0170	0.0850	mg/L	08/06/21	NA

Form: Mis

Electronically signed and approved by: Bruce L. Bornstein Date: 08/09/21

ALPHA ANALYTICAL

ANALYTICAL REPORT

Lab Number:	L2139448
Client:	Envirotech Laboratories, Inc. 8 Jan Sebastian Drive Unit 12 Sandwich, MA 02563
ATTN:	Ron Saari
Phone:	(800) 339-6460
Project Name:	PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number:	Not Specified
Report Date:	07/29/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2139448
Report Date: 07/29/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2139448-01	WW-211678	WATER	Not Specified	07/22/21 11:00	07/22/21
L2139448-02	WW-211679	WATER	Not Specified	07/22/21 11:10	07/22/21
L2139448-03	WW-211680	WATER	Not Specified	07/22/21 11:20	07/22/21
L2139448-04	WW-211681	WATER	Not Specified	07/22/21 11:30	07/22/21
L2139448-05	WW-211682	WATER	Not Specified	07/22/21 11:45	07/22/21
L2139448-06	WW-211683	WATER	Not Specified	07/22/21 12:15	07/22/21
L2139448-07	WW-211684	WATER	Not Specified	07/22/21 12:35	07/22/21

Project Name:	PLYMOUTH ENVIRONMENTAL MANAGEM	**Lab Number:**	L2139448
Project Number:	Not Specified	**Report Date:**	07/29/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	PLYMOUTH ENVIRONMENTAL MANAGEM	**Lab Number:**	L2139448
Project Number:	Not Specified	**Report Date:**	07/29/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L2139448-03: A sample identified as "WW-211680" was listed on the Chain of Custody, but not received. This was verified by the client and submitted at a later date.

Chlorophyll A

L2139448-03 was filtered with the method required holding time exceeded.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Caitlin Walukevich Caitlin Walukevich

Title: Technical Director/Representative Date: 07/29/21

INORGANICS
&
MISCELLANEOUS

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2139448
Report Date: 07/29/21

SAMPLE RESULTS

Lab ID: L2139448-01
Client ID: WW-211678
Sample Location: Not Specified

Date Collected: 07/22/21 11:00
Date Received: 07/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	12.9		mg/m3	2.00	NA	1	07/23/21 08:00	07/26/21 07:05	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2139448
Report Date: 07/29/21

SAMPLE RESULTS

Lab ID: L2139448-02
Client ID: WW-211679
Sample Location: Not Specified

Sample Depth:
Matrix: Water

Date Collected: 07/22/21 11:10
Date Received: 07/22/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	13.3		mg/m3	2.00	NA	1	07/23/21 08:00	07/26/21 07:05	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2139448
Report Date: 07/29/21

SAMPLE RESULTS

Lab ID: L2139448-03
Client ID: WW-211680
Sample Location: Not Specified

Date Collected: 07/22/21 11:20
Date Received: 07/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	3.36		mg/m3	2.00	NA	1	07/24/21 09:00	07/26/21 07:05	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2139448
Report Date: 07/29/21

SAMPLE RESULTS

Lab ID: L2139448-04
Client ID: WW-211681
Sample Location: Not Specified

Sample Depth:
Matrix: Water

Date Collected: 07/22/21 11:30
Date Received: 07/22/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	4.58		mg/m3	2.00	NA	1	07/23/21 08:00	07/26/21 07:05	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2139448
Report Date: 07/29/21

SAMPLE RESULTS

Lab ID: L2139448-05
Client ID: WW-211682
Sample Location: Not Specified

Sample Depth:
Matrix: Water

Date Collected: 07/22/21 11:45
Date Received: 07/22/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	5.43		mg/m3	2.00	NA	1	07/23/21 08:00	07/26/21 07:05	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2139448
Report Date: 07/29/21

SAMPLE RESULTS

Lab ID: L2139448-06
Client ID: WW-211683
Sample Location: Not Specified

Date Collected: 07/22/21 12:15
Date Received: 07/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	10.2		mg/m3	2.00	NA	1	07/23/21 08:00	07/26/21 07:05	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2139448
Report Date: 07/29/21

SAMPLE RESULTS

Lab ID: L2139448-07
Client ID: WW-211684
Sample Location: Not Specified

Date Collected: 07/22/21 12:35
Date Received: 07/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	3.72		mg/m3	2.00	NA	1	07/23/21 08:00	07/26/21 07:05	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANA
Project Number: Not Specified

Lab Number: L2139448
Report Date: 07/29/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02,04-07 Batch: WG1527097-1										
Chlorophyll A	ND		mg/m3	2.00	NA	1	07/23/21 08:00	07/26/21 07:05	121,10200H	MT
General Chemistry - Westborough Lab for sample(s): 03 Batch: WG1527514-1										
Chlorophyll A	ND		mg/m3	2.00	NA	1	07/24/21 09:00	07/26/21 07:05	121,10200H	MT

Lab Duplicate Analysis

Batch Quality Control

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2139448
Report Date: 07/29/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02,04-07 QC Batch ID: WG1527097-2 QC Sample: L2139448-02 Client ID: WW-211679						
Chlorophyll A	13.3	12.4	mg/m3	7		35
General Chemistry - Westborough Lab Associated sample(s): 03 QC Batch ID: WG1527514-2 QC Sample: L2139751-01 Client ID: DUP Sample						
Chlorophyll A	4.21	4.25	mg/m3	1		35

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
A1	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2139448-01A	Brown Plastic 1000ml unpreserved	A	NA		3.3	Y	Absent		CHLORO-A(1)
L2139448-01B	Brown Plastic 1000ml unpreserved	A	NA		3.3	Y	Absent		CHLORO-A(1)
L2139448-02A	Brown Plastic 1000ml unpreserved	A	NA		3.3	Y	Absent		CHLORO-A(1)
L2139448-02B	Brown Plastic 1000ml unpreserved	A	NA		3.3	Y	Absent		CHLORO-A(1)
L2139448-03A	Brown Plastic 1000ml unpreserved	A1	NA		2.0	Y	Absent		CHLORO-A(1)
L2139448-03B	Brown Plastic 1000ml unpreserved	A1	NA		2.0	Y	Absent		CHLORO-A(1)
L2139448-04A	Brown Plastic 1000ml unpreserved	A	NA		3.3	Y	Absent		CHLORO-A(1)
L2139448-04B	Brown Plastic 1000ml unpreserved	A	NA		3.3	Y	Absent		CHLORO-A(1)
L2139448-05A	Brown Plastic 1000ml unpreserved	A	NA		3.3	Y	Absent		CHLORO-A(1)
L2139448-05B	Brown Plastic 1000ml unpreserved	A	NA		3.3	Y	Absent		CHLORO-A(1)
L2139448-06A	Brown Plastic 1000ml unpreserved	A	NA		3.3	Y	Absent		CHLORO-A(1)
L2139448-06B	Brown Plastic 1000ml unpreserved	A	NA		3.3	Y	Absent		CHLORO-A(1)
L2139448-07A	Brown Plastic 1000ml unpreserved	A	NA		3.3	Y	Absent		CHLORO-A(1)
L2139448-07B	Brown Plastic 1000ml unpreserved	A	NA		3.3	Y	Absent		CHLORO-A(1)

*Values in parentheses indicate holding time in days

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	PLYMOUTH ENVIRONMENTAL MANAGEM	**Lab Number:**	L2139448
Project Number:	Not Specified	**Report Date:**	07/29/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	PLYMOUTH ENVIRONMENTAL MANAGEM	**Lab Number:**	L2139448
Project Number:	Not Specified	**Report Date:**	07/29/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified
Lab Number: L2139448
Report Date: 07/29/21

REFERENCES

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2**: THMs and VOCs; **EPA 504.1**: EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Eel River SW Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
WW-211678 7/22/21	1100	S-5B	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN, TP, TOC	H2S04
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria E.coli: 55	NONE
			2	Amber plastic	Chlorophyll-a	NONE
WW-211679 7/22/21	1110	S-8A	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN, TP, TOC	H2S04
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria E.coli: ~~200~~ 55 KF	NONE
			2	Amber plastic	Chlorophyll-a	NONE

16W NB

Relinquished By: Date/Time
7/22/21 1:25

Received By: Date/Time:
07/22/21 1330

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Eel River SW Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
WW-211680 7/22/21	1120	S-4B	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	H2S04
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria E.coli= 200	NONE
			2	Amber plastic	Chlorophyll-a	NONE
WW-211681 7/22/21	1130	S-8B	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	H2S04
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria E.coli= 260	NONE
			2	Amber plastic	Chlorophyll-a	NONE

16w NB

Relinquished By: Date/Time
KTow 7/22/21 1:25

Received By: Date/Time:
KW 07/22/21 1330

7/26 Emailed Kim re: e-coli at S-8B - NB

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Eel River SW Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
WW-211682 7/22/21	1145	S-3A	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	H2S04
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria E.coli=40	NONE
			2	Amber plastic	Chlorophyll-a	NONE
WW-211683 7/22/21	1215	S-2C	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	H2S04
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria E.coli=10	NONE
			2	Amber plastic	Chlorophyll-a	NONE

16W NB

Relinquished By: Date/Time
KTow 7/22/21 1:20

Received By: Date/Time:
K/V 07/22/21 1330

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Eel River SW Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

WW-2116684

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
7/22/21	1235	S-6A	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	H2S04
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria E.coli: 90	NONE
			2	Amber plastic	Chlorophyll-a	NONE
			1	1 Liter Plastic	Diss TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	H2S04
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria	NONE
			2	Amber plastic	Chlorophyll-a	NONE

1600 NB

Relinquished By: Date/Time
7/22/21 1:25

Received By: Date/Time:
07/22/21 1330

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, December 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Eel River SW Sampling* ***Comments:***
Project Number:
Sampled By: *K.Tower*
Lab Order Number: *WW-212016*
Date Received: *08/30/21*

Sample Type	*Sample Time*	*Sample Date*	*Comments*			
S-5B A	10:55	08/30/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	0.45	NA	10/14/21	KB/MS	Calculation
Total Dissolved Solids	mg/L	120	6.0	09/08/21	MS/KB	SM 2540 C
Total Organic Carbon*	mg/L	2.04	0.017	10/21/21	NEC*	SM 5310 C
Boron	mg/L	0.014	0.010	09/03/21	KB	EPA 200.7
Nitrate-N	mg/L	0.06	0.01	08/31/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	08/31/21	SD	EPA 300.0
Total Kjeldhal Nitrogen	mg/L	0.39	0.2	10/08/21	KB/MS	SM4500-Norg B-C
Chloride	mg/L	52	3.0	08/31/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.053	0.005	09/19/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.21	0.20	10/08/21	KB/MS	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	1.29	0.017	10/21/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.06	NA	10/14/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.39	NA	10/14/21	KB	Calculation
Chlorophyll-a	*	9.40	*	09/01/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.038	0.005	09/01/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	0.75	NA	12/27/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.18	NA	10/14/21	KB/MS	Calculation
Total Dissolved Nitrogen	mg/L	0.27	NA	10/14/21	KB/MS	Calculation
E coli	CFU/100mL	50	<1	08/30/21	CF/SD @ 16:30	EPA 1603
Ammonia-N	mg/L	BRL	0.02	09/21/21	CLM	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, December 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*K.Tower*	
Lab Order Number:	*WW-212016*	
Date Received:	*08/30/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-5B A	10:55	08/30/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

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FAX (508)888-6446

Wednesday, December 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*K.Tower*	
Lab Order Number:	*WW-212017*	
Date Received:	*08/30/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-4A A	11:05	08/30/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	0.33	NA	10/14/21	KB/MS	Calculation
Total Dissolved Solids	mg/L	87	6.0	09/08/21	MS/KB	SM 2540 C
Total Organic Carbon*	mg/L	2.56	0.017	10/21/21	NEC*	SM 5310 C
Boron	mg/L	BRL	0.010	09/03/21	KB	EPA 200.7
Nitrate-N	mg/L	0.05	0.01	08/31/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	08/31/21	SD	EPA 300.0
Total Kjeldhal Nitrogen	mg/L	0.28	0.2	10/08/21	KB/MS	SM4500-Norg B-C
Chloride	mg/L	36	3.0	08/31/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.032	0.005	09/19/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.25	0.20	10/08/21	KB/MS	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	1.92	0.017	10/21/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.01	NA	12/28/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.28	NA	12/28/21	KB	Calculation
Chlorophyll-a	*	3.52	*	09/01/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.021	0.005	09/24/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	0.64	NA	12/27/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.03	NA	10/14/21	KB/MS	Calculation
Total Dissolved Nitrogen	mg/L	0.30	NA	10/14/21	KB/MS	Calculation
E coli	CFU/100mL	110	<1	08/30/21	CF/SD @ 16:30	EPA 1603
Ammonia-N	mg/L	BRL	0.02	09/16/21	CLM	10-107-06-05-J

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We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

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(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, December 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*K.Tower*	
Lab Order Number:	*WW-212017*	
Date Received:	*08/30/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-4A A	11:05	08/30/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

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We certify that the following results are true and accurate to the best of our knowledge.

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Ronald J. Saari
Laboratory Director

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(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, December 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Eel River SW Sampling*
Project Number:
Sampled By: *K.Tower*
Lab Order Number: *WW-212018*
Date Received: *08/30/21*

Comments:

Sample Type	*Sample Time*	*Sample Date*	*Comments*			
S-3A A	11:20	08/30/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	0.53	NA	10/14/21	KB/MS	Calculation
Total Dissolved Solids	mg/L	88	6.0	09/08/21	MS/KB	SM 2540 C
Total Organic Carbon*	mg/L	1.64	0.017	10/21/21	NEC*	SM 5310 C
Boron	mg/L	BRL	0.010	09/03/21	KB	EPA 200.7
Nitrate-N	mg/L	0.14	0.01	08/31/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	08/31/21	SD	EPA 300.0
Total Kjeldhal Nitrogen	mg/L	0.39	0.2	10/08/21	KB/MS	SM4500-Norg B-C
Chloride	mg/L	34	3.0	08/31/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.033	0.005	09/19/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.28	0.20	10/08/21	KB/MS	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.97	0.017	10/21/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.14	NA	12/28/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.39	NA	12/28/21	KB	Calculation
Chlorophyll-a	*	5.68	*	09/01/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.021	0.005	09/24/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	0.67	NA	12/27/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.11	NA	10/14/21	KB/MS	Calculation
Total Dissolved Nitrogen	mg/L	0.42	NA	10/14/21	KB/MS	Calculation
E coli	CFU/100mL	90	<1	08/30/21	CF/SD @ 16:3	EPA 1603
Ammonia-N	mg/L	BRL	0.02	09/21/21	CLM	10-107-06-05-J

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We certify that the following results are true and accurate to the best of our knowledge.

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****see attached***

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Ronald J. Saari
Laboratory Director

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Wednesday, December 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*K.Tower*	
Lab Order Number:	*WW-212018*	
Date Received:	*08/30/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-3A A	11:20	08/30/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

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Laboratory Director

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FAX (508)888-6446

Wednesday, December 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Eel River SW Sampling*
Project Number:
Sampled By: *K.Tower*
Lab Order Number: *WW-212019*
Date Received: *08/30/21*

Comments:

Sample Type S-2C A	***Sample Time*** 11:35	***Sample Date*** 08/30/21	***Comments***			
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	0.45	NA	10/14/21	KB/MS	Calculation
Total Dissolved Solids	mg/L	74	6.0	09/08/21	MS/KB	SM 2540 C
Total Organic Carbon*	mg/L	1.92	0.017	10/21/21	NEC*	SM 5310 C
Boron	mg/L	BRL	0.010	09/03/21	KB	EPA 200.7
Nitrate-N	mg/L	0.03	0.01	08/31/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	08/31/21	SD	EPA 300.0
Total Kjeldhal Nitrogen	mg/L	0.42	0.2	10/08/21	KB/MS	SM4500-Norg B-C
Chloride	mg/L	29	3.0	08/31/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.041	0.005	09/19/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.35	0.20	10/08/21	KB/MS	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	1.21	0.017	10/21/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.03	NA	12/28/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.35	NA	12/28/21	KB	Calculation
Chlorophyll-a	*	11.2	*	09/01/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.021	0.005	09/24/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	0.71	NA	12/27/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.07	NA	10/14/21	KB/MS	Calculation
Total Dissolved Nitrogen	mg/L	0.38	NA	10/14/21	KB/MS	Calculation
E coli	CFU/100mL	>400	<1	08/30/21	CF/SD @ 16:30	EPA 1603
Ammonia-N	mg/L	BRL	0.02	09/21/21	CLM	10-107-06-05-J

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We certify that the following results are true and accurate to the best of our knowledge.

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****see attached***

By: Ronald J. Saari
Ronald J. Saari
Laboratory Director

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(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, December 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*K.Tower*	
Lab Order Number:	*WW-212019*	
Date Received:	*08/30/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-2C A	11:35	08/30/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

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Ronald J. Saari
Laboratory Director

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Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, December 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Eel River SW Sampling* ***Comments:***
Project Number:
Sampled By: *K.Tower*
Lab Order Number: *WW-212020*
Date Received: *08/30/21*

Sample Type	*Sample Time*	*Sample Date*	*Comments*			
S-6A A	11:50	08/30/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	<0.35	NA	11/09/21	MS/KB	Calculation
Total Dissolved Solids	mg/L	56	6.0	09/08/21	MS/KB	SM 2540 C
Total Organic Carbon*	mg/L	1.99	0.017	10/21/21	NEC*	SM 5310 C
Boron	mg/L	BRL	0.010	09/03/21	KB	EPA 200.7
Nitrate-N	mg/L	0.15	0.01	08/31/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	08/31/21	SD	EPA 300.0
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	10/23/21	MS/KB	SM4500-Norg B-C
Chloride	mg/L	19	3.0	08/31/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.060	0.005	09/19/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	10/23/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	1.14	0.017	10/21/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.15	NA	12/28/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.20	NA	12/28/21	KB	Calculation
Chlorophyll-a	*	2.76	*	09/01/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.06	0.005	09/24/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	0.85	NA	12/27/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.25	NA	11/09/21	MS/KB	Calculation
Total Dissolved Nitrogen	mg/L	<0.35	NA	11/09/21	MS/KB	Calculation
E coli	CFU/100mL	110	<1	08/30/21	CF/SD @ 16:30	EPA 1603
Ammonia-N	mg/L	BRL	0.02	09/21/21	CLM	10-107-06-05-J

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****see attached***

By: Ronald J. Saari
Ronald J. Saari
Laboratory Director

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FAX (508)888-6446

Wednesday, December 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:		
Sampled By:	*K.Tower*	
Lab Order Number:	*WW-212020*	
Date Received:	*08/30/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-6A A	11:50	08/30/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

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****see attached***

By: Ronald Saari

Ronald J. Saari
Laboratory Director

New England ChromaChem
6 Nichols Street
Salem, MA 01970
978-744-6600

MA DEP Lab. M-MA072 RI Lab. LAO00364

Client: Envirotech Laboratory, Inc.
State: Liquid

			Analytical Results									
Lab ID	**Client ID**	**Date Sampled**	**TOC mg/L**									
110325	WW-212016 Total	08/30/21	2.04									
110326	WW-212016 Dissolved	08/30/21	1.84									
110327	WW-212017 Total	08/30/21	2.56									
110328	WW-212017 Dissolved	08/30/21	2.47									
110329	WW-212018 Total	08/30/21	1.64									
110330	WW-212018 Dissolved	08/30/21	1.52									
110331	WW-212019 Total	08/30/21	1.92									
110332	WW-212019 Dissolved	08/30/21	1.76									
110333	WW-212020A Total	08/30/21	1.99									
110334	WW-212020A Dissolved	08/30/21	1.69									
110335	WW-212020B Dissolved	08/30/21	0.549									

Analytical Methodology

Analyte	**Method**	**Detection Limit**	**MRL**	**Units**	**Date Analyzed**	**Cert Status**	DF
TOC	Standard Methods 5310C	0.0170	0.0850	mg/L	10/21/21	N	1

Form: Mis

Electronically signed and approved by: Brenda Bornstein Date: 10/21/21

10/18

ALPHA ANALYTICAL

ANALYTICAL REPORT

Lab Number:	L2146628
Client:	Envirotech Laboratories, Inc. 8 Jan Sebastian Drive Unit 12 Sandwich, MA 02563
ATTN:	Ron Saari
Phone:	(800) 339-6460
Project Name:	PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number:	Not Specified
Report Date:	09/08/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2146628
Report Date: 09/08/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2146628-01	WW-212016	WATER	Not Specified	08/30/21 10:55	08/31/21
L2146628-02	WW-212017	WATER	Not Specified	08/30/21 11:05	08/31/21
L2146628-03	WW-212018	WATER	Not Specified	08/30/21 11:20	08/31/21
L2146628-04	WW-212019	WATER	Not Specified	08/30/21 11:35	08/31/21
L2146628-05	WW-212020	WATER	Not Specified	08/30/21 11:50	08/31/21

Project Name:	PLYMOUTH ENVIRONMENTAL MANAGEM	**Lab Number:**	L2146628
Project Number:	Not Specified	**Report Date:**	09/08/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Chlorophyll A

L2146628-01 through -05: The sample was analyzed with the method required holding time exceeded.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Cristin Walker Cristin Walker

Title: Technical Director/Representative Date: 09/08/21

INORGANICS
&
MISCELLANEOUS

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2146628
Report Date: 09/08/21

SAMPLE RESULTS

Lab ID: L2146628-01
Client ID: WW-212016
Sample Location: Not Specified

Date Collected: 08/30/21 10:55
Date Received: 08/31/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	9.40		mg/m3	2.00	NA	1	09/01/21 06:35	09/01/21 10:00	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2146628
Report Date: 09/08/21

SAMPLE RESULTS

Lab ID: L2146628-02
Client ID: WW-212017
Sample Location: Not Specified

Date Collected: 08/30/21 11:05
Date Received: 08/31/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	3.52		mg/m3	2.00	NA	1	09/01/21 06:35	09/01/21 10:00	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2146628
Report Date: 09/08/21

SAMPLE RESULTS

Lab ID: L2146628-03
Client ID: WW-212018
Sample Location: Not Specified

Date Collected: 08/30/21 11:20
Date Received: 08/31/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	5.68		mg/m3	2.00	NA	1	09/01/21 06:35	09/01/21 10:00	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2146628
Report Date: 09/08/21

SAMPLE RESULTS

Lab ID: L2146628-04
Client ID: WW-212019
Sample Location: Not Specified

Date Collected: 08/30/21 11:35
Date Received: 08/31/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	11.2		mg/m3	2.00	NA	1	09/01/21 06:35	09/01/21 10:00	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2146628
Report Date: 09/08/21

SAMPLE RESULTS

Lab ID: L2146628-05
Client ID: WW-212020
Sample Location: Not Specified

Sample Depth:
Matrix: Water

Date Collected: 08/30/21 11:50
Date Received: 08/31/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	2.76		mg/m3	2.00	NA	1	09/01/21 06:35	09/01/21 10:00	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANA(
Project Number: Not Specified

Lab Number: L2146628
Report Date: 09/08/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-05 Batch: WG1541969-1										
Chlorophyll A	ND		mg/m3	2.00	NA	1	09/01/21 06:35	09/01/21 10:00	121,10200H	MT

Lab Duplicate Analysis

Batch Quality Control

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2146628
Report Date: 09/08/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG1541969-2 QC Sample: L2146732-03 Client ID: DUP Sample						
Chlorophyll A	4.41	4.23	mg/m3	4		35

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2146628-01A	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)
L2146628-01B	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)
L2146628-02A	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)
L2146628-02B	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)
L2146628-03A	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)
L2146628-03B	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)
L2146628-04A	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)
L2146628-04B	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)
L2146628-05A	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)
L2146628-05B	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)

*Values in parentheses indicate holding time in days

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	PLYMOUTH ENVIRONMENTAL MANAGEM	**Lab Number:**	L2146628
Project Number:	Not Specified	**Report Date:**	09/08/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

REFERENCES

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

L2146628

CHAIN OF CUSTODY FORM

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Proj. No.	Project Name: Plymouth Environmental Management
Sampler:	KT

ENVIROTECH LABS, INC.
8 Jan Sebastian Dr., Unit 12
Sandwich, MA 02563
(508)888-6460/1-800-339-6460
FAX (508)888-6446

Alpha Analytical

Address: 8 Walkup Drive
Westborough, MA 02346
Phone#: 508-898-9220
Fax #:

Lab ID #	Date	Time	Comp	Grab	Sample location	container	Pres.	Sample Type	Analysis Requested
WW-212016	08/30/21	1055		X	S-5B	P	ice	surface water	Chlorophyll-a
WW-212017	08/30/21	1105		X	S-4A	P	ice	surface water	Chlorophyll-a
WW-212018	08/30/21	1120		X	S-3A	P	ice	surface water	Chlorophyll-a
WW-212019	08/30/21	1135		X	S-2C	P	ice	surface water	Chlorophyll-a
WW-212020	08/30/21	1150		X	S-6A	P	ice	surface water	Chlorophyll-a

Relinquished:	Date/Time	Received:	Relinquished:	Date/Time	Received:
	8/31/21 0910			8/31/21 1220	
Relinquished:	Date/Time	Received:	Relinquished:	Date/Time	Received:

Plymouth Environmental E-F

Calculations 0=<0.2

Lab ID	Date	TKN <0.2	Dissolve TKN	NH3 <0.02	NO3 <0.01	NO2 <0.004	Total Nitrogen	T Diss Nitrogen	Diss Inorg Nitrogen	Diss Org Nitrogen	Particulate Org Nitrogen	Total Phos(P)	Ortho Phos(P)
WW-212016	8/30/2021	0.39	0.21	<0.02	0.06	0.000	0.450	0.27	0.06	0.39	0.18	0.053	0.038
WW-212017	8/30/2021	0.28	0.25	<0.02	0.05	0.000	0.330	0.30	0.01	0.28	0.03	0.032	0.021
WW-212018	8/30/2021	0.39	0.28	<0.02	0.14	0.000	0.530	0.42	0.14	0.39	0.11	0.033	0.021
WW-212019	8/30/2021	0.42	0.35	<0.02	0.03	0.000	0.450	0.38	0.03	0.35	0.07	0.041	0.021
WW-212020	8/30/2021	<0.2	<0.2	<0.02	0.15	0.000	<0.35	<0.35	0.15	<0.20	<0.20	0.060	0.060
								0.00	0.00	0.00	0.00		
								0.00	0.00	0.00	0.00		
								0.00	0.00	0.00	0.00		
								0.00	0.00	0.00	0.00		
								0.00	0.00	0.00	0.00		
								0.00	0.00	0.00	0.00		
								0.00	0.00	0.00	0.00		
								0.00	0.00	0.00	0.00		
								0.00	0.00	0.00	0.00		

Dissolved Inorganic Nitrogen NH3 + NO2 + NO3

Dissolved Organic Nitrogen TKN Diss - NH3

Particulate Organic Carbon TOC - DOC

Particulate Organic Nitrogen (TKN - Ammonia-N) - (TKN Dissolved - Ammonia-N)

POC 0=<0.017	TOC <0.017	D TOC <0.017
0.750	2.040	1.290
0.640	2.560	1.920
0.670	1.640	0.970
0.710	1.920	1.210
0.040	0.590	0.550
0.00		
0.00		
0.00		
0.00		
0.00		
0.00		
0.00		
0.00		
0.00		

SCANNED

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Eel River SW Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
8/30/21	1055	S-5B	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	H2S04
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria - Eoli 50	NONE
			2	Amber plastic	Chlorophyll-a	NONE
8/30/21	1105	S-4A	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	H2S04
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria - Ecoli 110	NONE
			2	Amber plastic	Chlorophyll-a	NONE

ww-2/2016

ww-2017

1630 CF/SD

Relinquished By: Date/Time
Kim Tow 8/30/21 1245

Received By: Date/Time:
8/30/21 1245

SCANNED
DEC 30 2021

SCANNED
DEC 30 2021

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Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Eel River SW Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
8/30/21	1120	S-3A	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	H2S04
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria - Eoli 90	NONE
			2	Amber plastic	Chlorophyll-a	NONE
8/30/21	1135	S-2C	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	H2S04
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria - Ecoli >400	NONE
			2	Amber plastic	Chlorophyll-a	NONE

NW-2018

NW-2019

Relinquished By: Date/Time
Kim Tower 8/30/21 1245

Received By: Date/Time:
[signature] 8/30/21 1245

SCANNED
DEC 30 2021

SCANNED

L

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Eel River SW Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

ww - 2020

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
8/30/21	1150	S-6A	1	1 Liter Plastic	Diss TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	H2S04
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria - Eoli 110	NONE
			2	Amber plastic	Chlorophyll-a	NONE
			1	1 Liter Plastic	Diss TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN,TP, TOC	H2S04
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria - Ecoli	NONE
			2	Amber plastic	Chlorophyll-a	NONE

Relinquished By: Date/Time
Kim Tow 8/30/21 12.48

Received By: Date/Time:
8/30/21 1285

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DEC 30 2021

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, December 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling, Plymouth*	***Comments:***
Project Number:	*S-8A*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212278*	
Date Received:	*09/29/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
SW Sampling A	10:50	09/29/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.26	0.01	09/29/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	09/29/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.61	NA	11/09/21	MS/KB	Calculation
Total Dissolved Solids	mg/L	107	6.0	10/04/21	MS	SM 2540 C
Total Organic Carbon*	mg/L	2.74	0.017	09/29/21	NEC*	SM 5310 C
Boron	mg/L	0.011	0.010	10/05/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	0.35	0.2	10/23/21	MS/KB	SM4500-Norg B-C
Chloride	mg/L	41	3.0	09/29/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.045	0.005	10/16/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	10/23/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	2.72	0.017	09/29/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.26	NA	11/09/21	MS/KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.20	NA	11/09/21	MS/KB	Calculation
Chlorophyll-a	*	13.0	*	10/01/21	Alpha*	*
Particulate Organic Carbon	mg/L	0.02	NA	12/28/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	< 0.35	NA	11/09/21	MS/KB	Calculation
Total Dissolved Nitrogen	mg/L	0.26	NA	11/09/21	MS/KB	Calculation
E coli	CFU/100mL	200	<1	09/29/21	KF @ 15:45	EPA 1603
Ammonia-N	mg/L	BRL	0.02	10/04/21	CLM	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	0.016	0.005	09/30/21	CLM	10-115-01-1-A

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, December 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling, Plymouth*	***Comments:***
Project Number:	*S-8A*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212278*	
Date Received:	*09/29/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
SW Sampling A	10:50	09/29/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

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Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, December 28, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:	*S-5B*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212279*	
Date Received:	*09/29/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-5B A	11:05	09/29/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.26	0.01	09/29/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	09/29/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.51	NA	11/09/21	MS/KB	Calculation
Total Dissolved Solids	mg/L	108	6.0	10/04/21	MS	SM 2540 C
Total Organic Carbon*	mg/L	2.82	0.017	09/29/21	NEC*	SM 5310 C
Boron	mg/L	0.011	0.010	10/05/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	0.25	0.2	10/23/21	MS/KB	SM4500-Norg B-C
Chloride	mg/L	40	3.0	09/29/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.037	0.005	10/16/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	10/23/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	2.76	0.017	09/29/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.41	NA	12/28/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.05	NA	12/28/21	KB	Calculation
Chlorophyll-a	*	6.47	*	10/01/21	Alpha*	*
Particulate Organic Carbon	mg/L	0.06	NA	12/28/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.25	NA	11/09/21	MS/KB	Calculation
Total Dissolved Nitrogen	mg/L	0.48	NA	11/09/21	MS/KB	Calculation
E coli	CFU/100mL	180	<1	09/29/21	KF @ 15:45	EPA 1603
Ammonia-N	mg/L	0.15	0.02	10/04/21	CLM	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	0.009	0.005	09/30/21	CLM	10-115-01-1-A

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We certify that the following results are true and accurate to the best of our knowledge.

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(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, December 28, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:	*S-5B*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212279*	
Date Received:	*09/29/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-5B A	11:05	09/29/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

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Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, December 28, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:	*S-4A*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212280*	
Date Received:	*09/29/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-4A A	11:15	09/29/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.27	0.01	09/29/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	09/29/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.59	NA	11/09/21	MS/KB	Calculation
Total Dissolved Solids	mg/L	98.0	6.0	10/04/21	MS	SM 2540 C
Total Organic Carbon*	mg/L	7.65	0.017	09/29/21	NEC*	SM 5310 C
Boron	mg/L	0.010	0.010	10/05/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	0.32	0.2	10/23/21	MS/KB	SM4500-Norg B-C
Chloride	mg/L	30	3.0	09/29/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.031	0.005	10/16/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.21	0.20	10/23/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	6.89	0.017	09/29/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.27	NA	12/28/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.11	NA	12/28/21	KB	Calculation
Chlorophyll-a	*	3.49	*	10/01/21	Alpha*	*
Particulate Organic Carbon	mg/L	0.76	NA	12/28/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.53	NA	11/09/21	MS/KB	Calculation
Total Dissolved Nitrogen	mg/L	0.48	NA	11/09/21	MS/KB	Calculation
E coli	CFU/100mL	100	<1	09/29/21	KF @ 15:45	EPA 1603
Ammonia-N	mg/L	BRL	0.02	10/28/21	CLM	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	0.009	0.005	09/30/21	CLM	10-115-01-1-A

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

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Ronald J. Saari
Laboratory Director

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8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, December 28, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:	*S-4A*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212280*	
Date Received:	*09/29/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-4A A	11:15	09/29/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

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8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, December 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*S-3A*	***Comments:***
Project Number:	*Eel River SW Sampling*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212281*	
Date Received:	*09/29/21*	

Sample Type S-3A A	***Sample Time*** 11:25	***Sample Date*** 09/29/21	***Comments***			
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.30	0.01	09/29/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	09/29/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.41	NA	11/09/21	MS/KB	Calculation
Total Dissolved Solids	mg/L	85.0	6.0	10/04/21	MS	SM 2540 C
Total Organic Carbon*	mg/L	2.05	0.017	09/29/21	NEC*	SM 5310 C
Boron	mg/L	0.009	0.010	10/05/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	10/23/21	MS/KB	SM4500-Norg B-C
Chloride	mg/L	30	3.0	09/29/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.046	0.005	10/16/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	10/23/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	1.54	0.017	09/29/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.41	NA	12/28/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.02	NA	12/28/21	KB	Calculation
Chlorophyll-a	*	7.21	*	10/01/21	Alpha*	*
Particulate Organic Carbon	mg/L	0.51	NA	12/28/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.20	NA	12/28/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.41	NA	11/09/21	MS/KB	Calculation
E coli	CFU/100mL	110	<1	09/29/21	KF @ 15:45	EPA 1603
Ammonia-N	mg/L	0.18	0.02	10/04/21	CLM	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	0.025	0.005	09/30/21	CLM	10-115-01-1-A

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8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, December 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*S-3A*	***Comments:***
Project Number:	*Eel River SW Sampling*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212281*	
Date Received:	*09/29/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-3A A	11:25	09/29/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

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(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, December 28, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:	*S-2C*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212282*	
Date Received:	*09/29/21*	

Sample Type S-2C A	***Sample Time*** 11:50	***Sample Date*** 09/29/21	***Comments***			
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	BRL	0.01	09/29/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	09/29/21	SD	EPA 300.0
Total Nitrogen	mg/L	<0.21	NA	11/09/21	MS/KB	Calculation
Total Dissolved Solids	mg/L	76.0	6.0	10/04/21	MS	SM 2540 C
Total Organic Carbon*	mg/L	1.82	0.017	09/29/21	NEC*	SM 5310 C
Boron	mg/L	0.008	0.010	10/05/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	10/23/21	MS/KB	SM4500-Norg B-C
Chloride	mg/L	29	3.0	09/29/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.047	0.005	10/16/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	10/23/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	1.39	0.017	09/29/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.19	NA	12/28/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.01	NA	12/28/21	KB	Calculation
Chlorophyll-a	*	49.6	*	10/01/21	Alpha*	*
Particulate Organic Carbon	mg/L	0.43	NA	12/28/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.20	NA	11/09/21	MS/KB	Calculation
Total Dissolved Nitrogen	mg/L	<0.21	NA	11/09/21	MS/KB	Calculation
E coli	CFU/100mL	>400	<1	09/29/21	KF @ 15:45	EPA 1603
Ammonia-N	mg/L	0.19	0.02	10/04/21	CLM	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	0.029	0.005	09/30/21	CLM	10-115-01-1-A

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We certify that the following results are true and accurate to the best of our knowledge.

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****see attached***

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Ronald J. Saari
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FAX (508)888-6446

Tuesday, December 28, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Sampling*	***Comments:***
Project Number:	*S-2C*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212282*	
Date Received:	*09/29/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-2C A	11:50	09/29/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

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FAX (508)888-6446

Wednesday, December 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Samplying*	***Comments:***
Project Number:	*S-6A*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212283*	
Date Received:	*09/29/21*	

Sample Type S-6A A	***Sample Time*** 12:10	***Sample Date*** 09/29/21	***Comments***			
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Nitrate-N	mg/L	0.27	0.01	09/29/21	SD	EPA 300.0
Nitrite-N	mg/L	BRL	0.006	09/29/21	SD	EPA 300.0
Total Nitrogen	mg/L	0.69	NA	11/16/21	MS/KB	Calculation
Total Dissolved Solids	mg/L	56.0	6.0	10/04/21	MS	SM 2540 C
Total Organic Carbon*	mg/L	2.41	0.017	09/29/21	NEC*	SM 5310 C
Boron	mg/L	0.016	0.010	10/05/21	KB	EPA 200.7
Total Kjeldhal Nitrogen	mg/L	0.42	0.2	11/15/21	MS/KB	SM4500-Norg B-C
Chloride	mg/L	19	3.0	09/29/21	SD	EPA 300.0
Total Phosphorous (P)	mg/L	0.023	0.005	10/16/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	11/15/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	1.93	0.017	09/29/21	NEC*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.42	NA	12/28/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.05	NA	12/28/21	KB	Calculation
Chlorophyll-a	*	2.12	*	10/01/21	Alpha*	*
Particulate Organic Carbon	mg/L	0.48	NA	12/28/21	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.22	NA	12/28/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	<0.47	NA	12/28/21	KB	Calculation
E coli	CFU/100mL	50	<1	09/29/21	KF @ 15:45	EPA 1603
Ammonia-N	mg/L	0.15	0.02	10/04/21	CLM	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	BRL	0.005	09/30/21	CLM	10-115-01-1-A

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari
Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, December 29, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Eel River SW Samplying*	***Comments:***
Project Number:	*S-6A*	
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-212283*	
Date Received:	*09/29/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-6A A	12:10	09/29/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari

Ronald J. Saari
Laboratory Director

New England ChromaChem
6 Nichols Street
Salem, MA 01970
978-744-6600

MA DEP Lab. M-MA072 RI Lab. LAO00364

Client: Envirotech Laboratory, Inc.
State: Liquid

			Analytical Results										
Lab ID	**Client ID**	**Date Sampled**	**TOC mg/L**										
110226	WW-212278 Total	09/29/21	2.74										
110227	WW-212278 Dissolved	09/29/21	2.91										
110228	WW-212279 Total	09/29/21	2.82										
110229	WW-212279 Dissolved	09/29/21	2.95										
110230	WW-212280 Total	09/29/21	7.65										
110231	WW-212280 Dissolved	09/29/21	7.08										
110232	WW-212281 Total	09/29/21	2.05										
110233	WW-212281 Dissolved	09/29/21	1.73										
110234	WW-212282 Total	09/29/21	1.82										
110235	WW-212282 Dissolved	09/29/21	1.58										
110236	WW-212283A Total	09/29/21	2.41										
110237	WW-212283A Dissolved	09/29/21	2.12										
110238	WW-212283B Dissolved	09/29/21	0.190										

Analytical Methodology							
Analyte	**Method**	**Detection Limit**	**MRL**	**Units**	**Date Analyzed**	**Cert Status**	DF
TOC	Standard Methods 5310C	0.0170	0.0850	mg/L	10/14/21	NA	1

Form: Mis

Electronically signed and approved by: Brian L. Bornstein Date: 10/14/21

10/2

ANALYTICAL REPORT

Lab Number:	L2153014
Client:	Envirotech Laboratories, Inc. 8 Jan Sebastian Drive Unit 12 Sandwich, MA 02563
ATTN:	Ron Saari
Phone:	(800) 339-6460
Project Name:	PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number:	Not Specified
Report Date:	10/06/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L2153014
Report Date: 10/06/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2153014-01	WW-212278	WATER	Not Specified	09/29/21 10:50	09/30/21
L2153014-02	WW-212279	WATER	Not Specified	09/29/21 11:05	09/30/21
L2153014-03	WW-212280	WATER	Not Specified	09/29/21 11:15	09/30/21
L2153014-04	WW-212281	WATER	Not Specified	09/29/21 11:25	09/30/21
L2153014-05	WW-212282	WATER	Not Specified	09/29/21 11:50	09/30/21
L2153014-06	WW-212283	WATER	Not Specified	09/29/21 12:10	09/30/21

Project Name:	PLYMOUTH ENVIRONMENTAL MGMNT.	**Lab Number:**	L2153014
Project Number:	Not Specified	**Report Date:**	10/06/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	PLYMOUTH ENVIRONMENTAL MGMNT.	**Lab Number:**	L2153014
Project Number:	Not Specified	**Report Date:**	10/06/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Chlorophyll A

L2153014-01 through -06 were analyzed with the method required holding time exceeded.

WG1553094: A Laboratory Duplicate was not performed due to a laboratory oversight.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly Stenstrom

Title: Technical Director/Representative

Date: 10/06/21

INORGANICS
&
MISCELLANEOUS

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L2153014
Report Date: 10/06/21

SAMPLE RESULTS

Lab ID: L2153014-01
Client ID: WW-212278
Sample Location: Not Specified

Date Collected: 09/29/21 10:50
Date Received: 09/30/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	13.0		mg/m3	2.00	NA	1	09/30/21 20:28	10/01/21 10:30	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L2153014
Report Date: 10/06/21

SAMPLE RESULTS

Lab ID: L2153014-02
Client ID: WW-212279
Sample Location: Not Specified

Date Collected: 09/29/21 11:05
Date Received: 09/30/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	6.47		mg/m3	2.00	NA	1	09/30/21 20:28	10/01/21 10:30	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L2153014
Report Date: 10/06/21

SAMPLE RESULTS

Lab ID: L2153014-03
Client ID: WW-212280
Sample Location: Not Specified

Date Collected: 09/29/21 11:15
Date Received: 09/30/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	3.49		mg/m3	2.00	NA	1	09/30/21 20:28	10/01/21 10:30	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L2153014
Report Date: 10/06/21

SAMPLE RESULTS

Lab ID: L2153014-04
Client ID: WW-212281
Sample Location: Not Specified

Date Collected: 09/29/21 11:25
Date Received: 09/30/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	7.21		mg/m3	2.00	NA	1	09/30/21 20:28	10/01/21 10:30	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L2153014
Report Date: 10/06/21

SAMPLE RESULTS

Lab ID: L2153014-05
Client ID: WW-212282
Sample Location: Not Specified

Date Collected: 09/29/21 11:50
Date Received: 09/30/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	49.6		mg/m3	2.00	NA	1	09/30/21 20:28	10/01/21 10:30	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L2153014
Report Date: 10/06/21

SAMPLE RESULTS

Lab ID: L2153014-06
Client ID: WW-212283
Sample Location: Not Specified

Date Collected: 09/29/21 12:10
Date Received: 09/30/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	2.12		mg/m3	2.00	NA	1	09/30/21 20:28	10/01/21 10:30	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MGMN
Project Number: Not Specified

Lab Number: L2153014
Report Date: 10/06/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-06 Batch: WG1553094-1										
Chlorophyll A	ND		mg/m3	2.00	NA	1	09/30/21 20:28	10/01/21 10:30	121,10200H	MT

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2153014-01A	Brown Plastic 1000ml unpreserved	A	NA		3.6	Y	Absent		CHLORO-A(1)
L2153014-01B	Brown Plastic 1000ml unpreserved	A	NA		3.6	Y	Absent		CHLORO-A(1)
L2153014-02A	Brown Plastic 1000ml unpreserved	A	NA		3.6	Y	Absent		CHLORO-A(1)
L2153014-02B	Brown Plastic 1000ml unpreserved	A	NA		3.6	Y	Absent		CHLORO-A(1)
L2153014-03A	Brown Plastic 1000ml unpreserved	A	NA		3.6	Y	Absent		CHLORO-A(1)
L2153014-03B	Brown Plastic 1000ml unpreserved	A	NA		3.6	Y	Absent		CHLORO-A(1)
L2153014-04A	Brown Plastic 1000ml unpreserved	A	NA		3.6	Y	Absent		CHLORO-A(1)
L2153014-04B	Brown Plastic 1000ml unpreserved	A	NA		3.6	Y	Absent		CHLORO-A(1)
L2153014-05A	Brown Plastic 1000ml unpreserved	A	NA		3.6	Y	Absent		CHLORO-A(1)
L2153014-05B	Brown Plastic 1000ml unpreserved	A	NA		3.6	Y	Absent		CHLORO-A(1)
L2153014-06A	Brown Plastic 1000ml unpreserved	A	NA		3.6	Y	Absent		CHLORO-A(1)
L2153014-06B	Brown Plastic 1000ml unpreserved	A	NA		3.6	Y	Absent		CHLORO-A(1)

*Values in parentheses indicate holding time in days

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	PLYMOUTH ENVIRONMENTAL MGMNT.	**Lab Number:**	L2153014
Project Number:	Not Specified	**Report Date:**	10/06/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: DU Report with 'J' Qualifiers

REFERENCES

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Eel River SW Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

WW-212278

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
9/29/21	1050	S-8A	2	500ml Plastic	Diss TKN, TOC diss low, TDS	NONE
			2	500ml Plastic	TKN, TN, TP, TOC	NONE
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria - Eoli 200	NONE
			2	Amber plastic	Chlorophyll-a	NONE
9/29/21	1105	S-5B	2	500ml Plastic	Diss TKN, TOC diss low, TDS	NONE
			2	500ml Plastic	TKN, TN, TP, TOC	NONE
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria - Eoli 180	NONE
			2	Amber plastic	Chlorophyll-a	NONE

2279

1545 KF

Relinquished By: Date/Time
Kim Tow 9/29/21

Received By: Date/Time:
9/29/21 1300

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Eel River SW Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
2288 9/29/21	1115	S-4A	2	500ml Plastic	Diss TKN, TOC diss low, TDS	NONE
			2	500ml Plastic	TKN, TN,TP, TOC	NONE
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria - Eoli 100	NONE
			2	Amber plastic	Chlorophyll-a	NONE
2281 9/29/21	1125	S-3A	2	500ml Plastic	Diss TKN, TOC diss low, TDS	NONE
			2	500ml Plastic	TKN, TN,TP, TOC	NONE
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria - Eoli 110	NONE
			2	Amber plastic	Chlorophyll-a	NONE

1545 KF

Relinquished By: Date/Time
Kim Tm 9/29/21

Received By: Date/Time:
9/29/21

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Eel River SW Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
2282 9/29/21	1150	S-2C	2	500ml Plastic	Diss TKN, TOC diss low, TDS	NONE
			2	500ml Plastic	TKN, TN,TP, TOC	NONE
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria - Eoli >400	NONE
			2	Amber plastic	Chlorophyll-a	NONE
2283 9/29/21	1210	S-6A	2	500ml Plastic	Diss TKN, TOC diss low, TDS	NONE
			2	500ml Plastic	TKN, TN,TP, TOC	NONE
			1	Plastic	Orthophosphate	NONE
			1	500mL Plastic	NO3, NO2, Chloride	NONE
			1	250mL	Boron	HN03
			1	100mL Plastic	Bacteria - Eoli 50	NONE
			2	Amber plastic	Chlorophyll-a	NONE

1545 KF

Relinquished By: Date/Time
Kim Tow 9/29/21

Received By: Date/Time:
09/29/21

110226 - 110238

CHAIN OF CUSTODY FORM

PWS:	Project Name: Plymouth Env.
Sampler:	KT

ENVIROTECH LABS, INC.
8 Jan Sebastian Dr., Unit 12
Sandwich, MA 02563
(508)888-6460
1-800-339-6460
FAX (508)888-6446

NE Chromachem
Address: 6 Nichols St, Salem, MA 01970
Phone#: 1-978-744-6600
Fax#: 206 984 2474

Lab ID #	Date	Time	Comp	Grab	Station location	Container	Pres.	Sample type	Analysis requested
WW-212278	09/29/21	1050		X	S-8A	2VOA	H_2SO_4		TOC total low detection 110226
						2VOA	H_2SO_4		TOC dissolved 110227
WW-212279	09/29/21	1105		X	S-5B	2VOA	H_2SO_4		TOC total low detection 110228
						2VOA	H_2SO_4		TOC dissolved 110229
WW-212280	09/29/21	1115		X	S-4A	2VOA	H_2SO_4		TOC total low detection 110230
						2VOA	H_2SO_4		TOC dissolved 110231
WW-212281	09/29/21	1125		X	S-3A	2VOA	H_2SO_4		TOC total low detection 110232
						2VOA	H_2SO_4		TOC dissolved 110233
WW-212282	09/29/21	1150		X	S-2C	2VOA	H_2SO_4		TOC total low detection 110234
						2VOA	H_2SO_4		TOC dissolved 110235
WW-212283A	09/29/21	1210		X	S-6A	2VOA	H_2SO_4		TOC total low detection 110236
						2VOA	H_2SO_4		TOC dissolved 110237
WW-212283B	09/29/21	1600		X	Blank	2VOA	H_2SO_4		TOC dissolved 110238

Total TOC low level 0.5 mg/L
dissolved TOC low level 0.5 mg/L

Relinquished:	Date/Time 10/12/21 17:00	Received: UPS
Relinquished: UPS	Date/Time 10/13/21 10:00	Received: AP

TOC dissolved samples are filtered
Contact lab with any exceeded MCL

L2153014

CHAIN OF CUSTODY FORM

C

Proj. No.	Project Name: Plymouth Environmental Management
Sampler:	KT

ENVIROTECH LABS, INC.
8 Jan Sebastian Dr., Unit 12
Sandwich, MA 02563
(508)888-6460/1-800-339-6460
FAX (508)888-6446

Alpha Analytical
Address: 8 Walkup Drive
Westborough, MA 02346
Phone#: 508-898-9220
Fax #:

Lab ID #	Date	Time	Comp	Grab	Sample location	container	Pres.	Sample Type	Analysis Requested
WW-212278	09/29/21	1050		X	S-8A	P	ice	surface water	Chlorophyll-a
WW-212279	09/29/21	1105		X	S-5B	P	ice	surface water	Chlorophyll-a
WW-212280	09/29/21	1115		X	S-4A	P	ice	surface water	Chlorophyll-a
WW-212281	09/29/21	1125		X	S-3A	P	ice	surface water	Chlorophyll-a
WW-212282	09/29/21	1150		X	S-2C	P	ice	surface water	Chlorophyll-a
WW-212283	09/29/21	1210		X	S-6A	P	ice	surface water	Chlorophyll-a

Relinquished:	Date/Time	Received:	Relinquished:	Date/Time	Received:
[signature]	9/30/21 0900	MCM MWR 412	MCM	9/30/21 1238	[signature]
Relinquished:	Date/Time	Received:	Relinquished:	Date/Time	Received:

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, July 6, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Harbor Sampling*
Project Number:
Sampled By: *Kim Tower*
Lab Order Number: *WW-211263*
Date Received: *06/07/21*

Comments: RUSH DUE 7/2/21

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-10 HST A	12:30	06/07/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	0.42	NA	07/02/21	TM	Calculation
Total Organic Carbon*	mg/L	<0.50	0.017	06/21/21	RIA*	SM 5310 C
Total Kjeldhal Nitrogen	mg/L	0.39	0.2	06/15/21	KB	SM4500-Norg B-C
Total Phosphorous (P)	mg/L	0.051	0.005	06/16/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.26	0.20	06/15/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	<0.50	0.017	06/21/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.09	NA	07/05/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.20	NA	07/05/21	KB	Calculation
Chlorophyll-a	*	ND	*	06/08/21	Alpha*	*
Particulate Organic Carbon	mg/L	<0.50	NA	07/02/21	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.13	NA	07/02/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.29	NA	07/02/21	TM	Calculation
E coli	CFU/100mL	5	<1	06/07/21	KF @ 15:30	EPA 1603
Nitrate-N	mg/L	0.03	0.02	06/09/21	TM	SM 4500-NO3 E
Nitrite-N	mg/L	BRL	0.010	06/09/21	TM	SM 4500-NO2-B
Ammonia-N	mg/L	0.06	0.02	07/05/21	KB	10-107-06-05-J
Ortho Phosphorous (P)	mg/L	0.025	0.005	06/09/21	TM/KB	10-115-01-1-A

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari
Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, July 6, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Harbor Sampling*
Project Number:
Sampled By: *Kim Tower*
Lab Order Number: *WW-211264*
Date Received: *06/07/21*

Comments: RUSH DUE 7/2/21

Sample Type	*Sample Time*	*Sample Date*	*Comments*			
S-7 HST A	12:40	06/07/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	0.56	NA	07/02/21	TM	Calculation
Total Organic Carbon*	mg/L	<0.50	0.017	06/21/21	RIA*	SM 5310 C
Total Kjeldhal Nitrogen	mg/L	0.54	0.2	06/15/21	KB	SM4500-Norg B-C
Total Phosphorous (P)	mg/L	0.039	0.005	06/16/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.43	0.20	06/15/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	<0.50	0.017	06/21/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.11	NA	07/05/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.34	NA	07/05/21	KB	Calculation
Chlorophyll-a	*	ND	*	06/09/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.027	0.005	06/09/21	TM/KB	SM 4500-P
Particulate Organic Carbon	mg/L	<0.50	NA	07/02/21	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.11	NA	07/02/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.45	NA	07/02/21	TM	Calculation
E coli	CFU/100mL	<5	<1	06/07/21	KF @ 15:30	EPA 1603
Nitrate-N	mg/L	0.01	0.02	06/09/21	TM	SM 4500-NO3 E
Nitrite-N	mg/L	0.01	0.010	06/09/21	TM	SM 4500-NO2-B
Ammonia-N	mg/L	0.09	0.02	07/05/21	KB	10-107-06-05-J

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We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari
Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, July 6, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Harbor Sampling*
Project Number:
Sampled By: *Kim Tower*
Lab Order Number: *WW-211265*
Date Received: *06/07/21*

Comments: RUSH DUE 7/2/21

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
EBB S-10 A	10:30	06/07/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	0.38	NA	07/02/21	KB	Calculation
Total Organic Carbon*	mg/L	<0.50	0.017	06/21/21	RIA*	SM 5310 C
Total Kjeldhal Nitrogen	mg/L	0.32	0.2	06/15/21	KB	SM4500-Norg B-C
Total Phosphorous (P)	mg/L	0.052	0.005	06/16/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.29	0.20	06/15/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	<0.50	0.017	06/21/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.31	NA	07/05/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.04	NA	07/05/21	KB	Calculation
Chlorophyll-a	*	ND	*	06/09/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.025	0.005	06/09/21	TM/KB	SM 4500-P
Particulate Organic Carbon	mg/L	<0.50	NA	07/02/21	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.03	NA	07/02/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.35	NA	07/02/21	KB	Calculation
E coli	CFU/100mL	<5	<1	06/07/21	KF @ 15:30	EPA 1603
Nitrate-N	mg/L	0.06	0.02	06/09/21	TM	SM 4500-NO3 E
Nitrite-N	mg/L	BRL	0.010	06/09/21	TM	SM 4500-NO2-B
Ammonia-N	mg/L	0.25	0.02	07/05/21	KB	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari
Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, July 6, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Harbor Sampling*
Project Number:
Sampled By: *Kim Tower*
Lab Order Number: *WW-211266*
Date Received: *06/07/21*

Comments: RUSH DUE 7/2/21

Sample Type	*Sample Time*	*Sample Date*	*Comments*			
EBB S-7 A	10:45	06/07/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	0.31	NA	07/02/21	TM	Calculation
Total Organic Carbon*	mg/L	<0.50	0.017	06/21/21	RIA*	SM 5310 C
Total Kjeldhal Nitrogen	mg/L	0.29	0.2	06/15/21	KB	SM4500-Norg B-C
Total Phosphorous (P)	mg/L	0.032	0.005	06/16/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.27	0.20	06/15/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	<0.50	0.017	06/21/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	<0.04	NA	07/05/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.27	NA	07/05/21	KB	Calculation
Chlorophyll-a	*	ND	*	06/09/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.027	0.005	06/09/21	TM/KB	SM 4500-P
Particulate Organic Carbon	mg/L	<0.50	NA	07/02/21	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.02	NA	07/02/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.29	NA	07/02/21	KB	Calculation
E coli	CFU/100mL	<5	<1	06/07/21	KF @ 15:30	EPA 1603
Nitrate-N	mg/L	0.01	0.02	06/09/21	TM	SM 4500-NO3 E
Nitrite-N	mg/L	0.01	0.010	06/09/21	TM	SM 4500-NO2-B
Ammonia-N	mg/L	BRL	0.02	07/05/21	KB	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari
Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, July 6, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Harbor Sampling*
Project Number:
Sampled By: *Kim Tower*
Lab Order Number: *WW-211267*
Date Received: *06/07/21*

Comments: RUSH DUE 7/2/21

Sample Type	*Sample Time*	*Sample Date*	*Comments*			
S-8A HST A	12:50	06/07/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	0.53	NA	07/02/21	KB	Calculation
Total Organic Carbon*	mg/L	<0.50	0.017	06/21/21	RIA*	SM 5310 C
Total Kjeldhal Nitrogen	mg/L	0.51	0.2	06/15/21	KB	SM4500-Norg B-C
Total Phosphorous (P)	mg/L	0.056	0.005	06/16/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.47	0.20	06/15/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	<0.50	0.017	06/21/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.10	NA	07/05/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.39	NA	07/05/21	KB	Calculation
Chlorophyll-a	*	ND	*	06/09/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.027	0.005	06/09/21	TM/KB	SM 4500-P
Particulate Organic Carbon	mg/L	<0.50	NA	07/02/21	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.04	NA	07/02/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.49	NA	07/02/21	KB	Calculation
E coli	CFU/100mL	<5	<1	06/07/21	KF @ 15:30	EPA 1603
Nitrate-N	mg/L	0.01	0.02	06/09/21	TM	SM 4500-NO3 E
Nitrite-N	mg/L	0.01	0.010	06/09/21	TM	SM 4500-NO2-B
Ammonia-N	mg/L	0.08	0.02	07/05/21	KB	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: R Ronald J Saari

Ronald J. Saari
Laboratory Director

ANALYTICAL REPORT

Lab Number:	L2130585
Client:	Envirotech Laboratories, Inc. 8 Jan Sebastian Drive Unit 12 Sandwich, MA 02563
ATTN:	Ron Saari
Phone:	(800) 339-6460
Project Name:	PLYMOUTH ENVIRONMENTAL MNGMNT
Project Number:	Not Specified
Report Date:	06/24/21

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: PLYMOUTH ENVIRONMENTAL MNGMNT
Project Number: Not Specified

Lab Number: L2130585
Report Date: 06/24/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2130585-01	WW-211263	WATER	Not Specified	06/07/21 12:30	06/08/21
L2130585-02	WW-211264	WATER	Not Specified	06/07/21 12:40	06/08/21
L2130585-03	WW-211265	WATER	Not Specified	06/07/21 10:30	06/08/21
L2130585-04	WW-211266	WATER	Not Specified	06/07/21 10:45	06/08/21
L2130585-05	WW-211267	WATER	Not Specified	06/07/21 12:50	06/08/21

Project Name:	PLYMOUTH ENVIRONMENTAL MNGMNT	**Lab Number:**	L2130585
Project Number:	Not Specified	**Report Date:**	06/24/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	PLYMOUTH ENVIRONMENTAL MNGMNT	**Lab Number:**	L2130585
Project Number:	Not Specified	**Report Date:**	06/24/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Chlorophyll A

L2130585-01 through -05 was filtered with the method required holding time exceeded.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Sebastian Corbin

Title: Technical Director/Representative Date: 06/24/21

INORGANICS
&
MISCELLANEOUS

Project Name: PLYMOUTH ENVIRONMENTAL MNGMNT
Project Number: Not Specified

Lab Number: L2130585
Report Date: 06/24/21

SAMPLE RESULTS

Lab ID: L2130585-01
Client ID: WW-211263
Sample Location: Not Specified

Date Collected: 06/07/21 12:30
Date Received: 06/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	ND		mg/m3	2.00	NA	1	06/08/21 14:30	06/09/21 08:30	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MNGMNT
Project Number: Not Specified

Lab Number: L2130585
Report Date: 06/24/21

SAMPLE RESULTS

Lab ID: L2130585-02
Client ID: WW-211264
Sample Location: Not Specified

Date Collected: 06/07/21 12:40
Date Received: 06/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	ND		mg/m3	2.00	NA	1	06/08/21 14:30	06/09/21 08:30	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MNGMNT
Project Number: Not Specified

Lab Number: L2130585
Report Date: 06/24/21

SAMPLE RESULTS

Lab ID: L2130585-03
Client ID: WW-211265
Sample Location: Not Specified

Date Collected: 06/07/21 10:30
Date Received: 06/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	ND		mg/m3	2.00	NA	1	06/08/21 14:30	06/09/21 08:30	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MNGMNT
Project Number: Not Specified

Lab Number: L2130585
Report Date: 06/24/21

SAMPLE RESULTS

Lab ID: L2130585-04
Client ID: WW-211266
Sample Location: Not Specified

Date Collected: 06/07/21 10:45
Date Received: 06/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	ND		mg/m3	2.00	NA	1	06/08/21 14:30	06/09/21 08:30	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MNGMNT
Project Number: Not Specified

Lab Number: L2130585
Report Date: 06/24/21

SAMPLE RESULTS

Lab ID: L2130585-05
Client ID: WW-211267
Sample Location: Not Specified

Date Collected: 06/07/21 12:50
Date Received: 06/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	ND		mg/m3	2.00	NA	1	06/08/21 14:30	06/09/21 08:30	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MNGM
Project Number: Not Specified

Lab Number: L2130585
Report Date: 06/24/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-05 Batch: WG1509204-1										
Chlorophyll A	ND		mg/m3	2.00	NA	1	06/08/21 14:30	06/09/21 08:30	121,10200H	MT

Lab Duplicate Analysis

Batch Quality Control

Project Name: PLYMOUTH ENVIRONMENTAL MNGMNT
Project Number: Not Specified

Lab Number: L2130585
Report Date: 06/24/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG1509204-2 QC Sample: L2130585-01 Client ID: WW-211263						
Chlorophyll A	ND	ND	mg/m3	NC		35

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2130585-01A	Brown Plastic 1000ml unpreserved	A	NA		5.1	Y	Absent		CHLORO-A(1)
L2130585-01B	Brown Plastic 1000ml unpreserved	A	NA		5.1	Y	Absent		CHLORO-A(1)
L2130585-02A	Brown Plastic 1000ml unpreserved	A	NA		5.1	Y	Absent		CHLORO-A(1)
L2130585-02B	Brown Plastic 1000ml unpreserved	A	NA		5.1	Y	Absent		CHLORO-A(1)
L2130585-03A	Brown Plastic 1000ml unpreserved	A	NA		5.1	Y	Absent		CHLORO-A(1)
L2130585-03B	Brown Plastic 1000ml unpreserved	A	NA		5.1	Y	Absent		CHLORO-A(1)
L2130585-04A	Brown Plastic 1000ml unpreserved	A	NA		5.1	Y	Absent		CHLORO-A(1)
L2130585-04B	Brown Plastic 1000ml unpreserved	A	NA		5.1	Y	Absent		CHLORO-A(1)
L2130585-05A	Brown Plastic 1000ml unpreserved	A	NA		5.1	Y	Absent		CHLORO-A(1)
L2130585-05B	Brown Plastic 1000ml unpreserved	A	NA		5.1	Y	Absent		CHLORO-A(1)

*Values in parentheses indicate holding time in days

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	PLYMOUTH ENVIRONMENTAL MNGMNT	**Lab Number:**	L2130585
Project Number:	Not Specified	**Report Date:**	06/24/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

REFERENCES

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.
Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

L2130585

CHAIN OF CUSTODY FORM

ENVIROTECH LABS, INC.
8 Jan Sebastian Dr., Unit 12
Sandwich, MA 02563
(508)888-6460/1-800-339-6460
FAX (508)888-6446

Alpha Analytical
Address: 8 Walkup Drive
Westborough, MA 02346
Phone#: 508-898-9220
Fax #:

Proj. No. | Project Name: Plymouth Environmental Management

Sampler: KT

Lab ID #	Date	Time	Comp	Grab	Sample location	container	Pres.	Sample Type	Analysis Requested
WW-211263	06/07/21	1230			S-10 at 2-4 HST	P	ice	surface water	Chlorophyll-a
WW-211264	06/07/21	1240			S-7 at 2-4 HST	P	ice	surface water	Chlorophyll-a
WW-211265	06/07/21	1030			S-10 at Ebb Tide	P	ice	surface water	Chlorophyll-a
WW-211266	06/07/21	1045			S-7 at Ebb Tide	P	ice	surface water	Chlorophyll-a
WW-211267	06/07/21	1250			S-8A at 2-4 HST	P	ice	surface water	Chlorophyll-a

Relinquished:	Date/Time	Received:	Relinquished:	Date/Time	Received:
	6/8/21 0910			6/8/21 1230	
Relinquished:	Date/Time	Received:	Relinquished:	Date/Time	Received:

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 6/17/2021
Date Reported: 6/23/2021
P.O. Number 211263 - 211267

Work Order #: 2106-09847

Project Name: PLYMOUTH ENV

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

R.I. Analytical Laboratories, Inc.

Laboratory Report

Envirotech Laboratories, Inc.

Work Order #: 2106-09847

Project Name: PLYMOUTH ENV

Sample Number: 001
Sample Description: WW-211263 S-10 EBB TIDE
Sample Type : GRAB
Sample Date / Time : 6/07/2021 @ 12:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TOC	<0.50	0.50	mg/l	SM5310C 21 ed.	6/21/2021	18:43	TML
DOC	<0.50	0.50	mg/l	SM5310C 21 ed.	6/21/2021	18:43	TML

Sample Number: 002
Sample Description: WW-211264 S-7 EBB TIDE
Sample Type : GRAB
Sample Date / Time : 6/07/2021 @ 12:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TOC	<0.50	0.50	mg/l	SM5310C 21 ed.	6/21/2021	18:43	TML
DOC	<0.50	0.50	mg/l	SM5310C 21 ed.	6/21/2021	18:43	TML

Sample Number: 003
Sample Description: WW-211265 S-10 HST
Sample Type : GRAB
Sample Date / Time : 6/07/2021 @ 10:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TOC	<0.50	0.50	mg/l	SM5310C 21 ed.	6/21/2021	18:43	TML
DOC	<0.50	0.50	mg/l	SM5310C 21 ed.	6/21/2021	18:43	TML

Sample Number: 004
Sample Description: WW-211266 S-7 HST
Sample Type : GRAB
Sample Date / Time : 6/07/2021 @ 10:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TOC	<0.50	0.50	mg/l	SM5310C 21 ed.	6/21/2021	18:43	TML
DOC	<0.50	0.50	mg/l	SM5310C 21 ed.	6/21/2021	18:43	TML

R.I. Analytical Laboratories, Inc.

Laboratory Report

Envirotech Laboratories, Inc.

Work Order #: 2106-09847

Project Name: PLYMOUTH ENV

Sample Number: 005
Sample Description: WW-211267A S-8A HST
Sample Type : GRAB
Sample Date / Time : 6/07/2021 @ 12:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
TOC	<0.50	0.50	mg/l	SM5310C 21 ed.	6/21/2021 18:43	TML
DOC	<0.50	0.50	mg/l	SM5310C 21 ed.	6/21/2021 18:43	TML

Sample Number: 006
Sample Description: WW-211267B TRIP BLANK
Sample Type : GRAB
Sample Date / Time : 6/07/2021 @ 16:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
DOC	<0.50	0.50	mg/l	SM5310C 21 ed.	6/21/2021 18:43	TML

CHAIN OF CUSTODY FORM

PWS:	Project Name: Plymouth Env.
Sampler:	KT

ENVIROTECH LABS, INC.
8 Jan Sebastian Dr., Unit 12
Sandwich, MA 02563
(508)888-6460
1-800-339-6460
FAX (508)888-6446

RI Analytical
M RI 015
Address 41 Illinois Avenue
Warwick, RI 02888
Phone# 401-737-8500
Fax# 401-738-1970

Lab ID #	Date	Time	Comp	Grab	Station location	Container	Pres.	Sample type	Analysis requested
WW-211263	06/07/21	1230		X	S-10 Ebb tide	P	H_2SO_4	Surface water	~~Ammonia-N (0.02 mdl)~~ KF
						plastic	H_2SO_4	Surface water	Total TOC low
						plastic	H_2SO_4	Surface water	Dissolved TOC low
WW-211264	06/07/21	1240		X	S-7 Ebb tide	P	H_2SO_4	Surface water	~~Ammonia-N (0.02 mdl)~~ KF
						plastic	H_2SO_4	Surface water	Total TOC low
						plastic	H_2SO_4	Surface water	Dissolved TOC low
WW-211265	06/07/21	1030		X	S-10 HST	P	H_2SO_4	Surface water	~~Ammonia-N (0.02 mdl)~~ KF
						plastic	H_2SO_4	Surface water	Total TOC low
						plastic	H_2SO_4	Surface water	~~Dissolved~~ TOC low
WW-211266	06/07/21	1045		X	S-7 HST	P	H_2SO_4	Surface water	~~Ammonia-N (0.02 mdl)~~ KF
						plastic	H_2SO_4	Surface water	Total TOC low
						plastic	H_2SO_4	Surface water	Dissolved TOC low
WW-211267A	06/07/21	1250		X	S-8A HST	P	H_2SO_4	Surface water	~~Ammonia-N (0.02 mdl)~~ KF
						plastic	H_2SO_4	Surface water	Total TOC low
						plastic	H_2SO_4	Surface water	Dissolved TOC low
WW-211267B	06/07/21	1600		X	Trip Blank	plastic	H_2SO_4	DI water	Dissolved TOC low

Ammonia-N low level 0.02 mg/L
2006 - 09747

Relinquished: KF	Date/Time 6/17/21 1120	Received: MEL (11)	**TOC dissolved samples are filtered**
Relinquished: MEL	Date/Time 6/17/21 1525	Received:	**Contact lab with any exceeded MCL** MEL 9.0

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine and Environmental Affairs
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Harbor Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

NEED RESULTS FOR PERMITTING DEADLINE BY END OF FIRST WEEK IN JULY
NITRATE AND NITRITE TO BE REPORTED SEPARATELY

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
6/7/21	1230	S-10 HST	1	1 Liter Plastic	Dissolved TKN, TOC diss low,TDS	NONE
			1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
			1	500mL Plastic	NO2, NO3	None
			1	Glass	Ortho	NONE
			1	Plastic	Bacteria e-coli 5	Sterile
			2	1 Liter Amber Plastic	Chlorophyll-a	NONE
6/7/21	1240	S-7 HST	1	1 Liter Plastic	Dissolved TKN, TOC diss low,TDS	NONE
			1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
			1	500mL Plastic	NO2, NO3	None
			1	Glass	Ortho	NONE
			1	Plastic	Bacteria e-coli <5	Sterile
			2	1 Liter Amber Plastic	Chlorophyll-a	NONE

NOTE: **Analysis needed for reporting in lowest detection possible**; O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Kjeldahl Nitrogen, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Bacteria E-coli, Chlorophyll-a

Relinquished By:	Date/Time	Received By:	Date/Time:
Kim Tower	6/7/21 1:30pm		6/7/21 1330

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine and Environmental Affairs
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Harbor Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

NEED RESULTS FOR PERMITTING DEADLINE BY END OF FIRST WEEK IN JULY 7/2
NITRATE AND NITRITE TO BE REPORTED SEPARATELY

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
WW-211265 6/7/21	1030	EBB S-10	1	1 Liter Plastic	Dissolved TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
			1	500mL Plastic	NO2, NO3	None
			1	Glass	Ortho	NONE
			1	Plastic	Bacteria e-coli <5	Sterile
			2	1 Liter Amber Plastic	Chlorophyll-a	NONE
WW-211266 6/7/21	1045	EBB S-7	1	1 Liter Plastic	Dissolved TKN, TOC diss low, TDS	NONE
			1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
			1	500mL Plastic	NO2, NO3	None
			1	Glass	Ortho	NONE
			1	Plastic	Bacteria e-coli <5	Sterile
			2	1 Liter Amber Plastic	Chlorophyll-a	NONE

NOTE: **Analysis needed for reporting in lowest detection possible**; O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Kjeldahl Nitrogen, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Bacteria E-coli, Chlorophyll-a

Relinquished By:	Date/Time	Received By:	Date/Time:
Kim Tower	6/7/21 1:30pm		6/7/21 1330

6/22

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine and Environmental Affairs
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Harbor Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

NEED RESULTS FOR PERMITTING DEADLINE BY END OF FIRST WEEK IN JULY 7/2
NITRATE AND NITRITE TO BE REPORTED SEPARATELY

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
WW-217267 6/7/21	1250	S-8A HST	1	1 Liter Plastic	Dissolved TKN, TOC diss low,TDS	NONE
			1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
			1	500mL Plastic	NO2, NO3	None
			1	Glass	Ortho	NONE
			1	Plastic	Bacteria e-coli 25	Sterile
			2	1 Liter Amber Plastic	Chlorophyll-a	NONE
			1	1 Liter Plastic	Dissolved TKN, TOC diss low,TDS	NONE
			1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
			1	500mL Plastic	NO2, NO3	None
			1	Glass	Ortho	NONE
			1	Plastic	Bacteria e-coli	Sterile
			2	1 Liter Amber Plastic	Chlorophyll-a	NONE

NOTE: **Analysis needed for reporting in lowest detection possible;** O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Kjeldahl Nitrogen, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Bacteria E-coli, Chlorophyll-a

Relinquished By:	Date/Time	Received By:	Date/Time:
	6/7/21 1330pm		6/7/21 1330

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, August 10, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Harbor Sampling*
Project Number:
Sampled By: *Kim Tower*
Lab Order Number: *WW-211519*
Date Received: *07/07/21*

Comments: DUE BEFORE 8/6/21

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-10 HST A	12:40	07/07/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Kjeldhal Nitrogen	mg/L	0.26	0.60	07/27/21	KB	SM4500-Norg B-C
Total Nitrogen	mg/L	0.28	NA	08/06/21	KB	Calculation
E-coli	CFU/100 mL	20	<1	07/07/21	NB @ 17:00	SM 9213 D
Total Organic Carbon*	mg/L	BRL	0.017	08/02/21	RIA*	SM 5310 C
Total Phosphorous (P)	mg/L	0.030	0.005	08/01/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.23	0.20	07/27/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	BRL	0.017	08/02/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.02	NA	08/06/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.23	NA	08/06/21	KB	Calculation
Chlorophyll-a	*	3.43	*	07/12/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.025	0.005	07/09/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	BRL	NA	08/06/21	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.03	NA	08/06/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.25	NA	08/06/21	KB	Calculation
Nitrate-N	mg/L	0.02	0.02	07/09/21	CLM	SM 4500-NO3 E
Nitrite-N	mg/L	BRL	0.010	07/09/21	CLM	SM 4500-NO2-B
Ammonia-N	mg/L	BRL	0.02	08/02/21	CLM	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: R Ronald Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, August 10, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: *Harbor Sampling*
Project Number:
Sampled By: *Kim Tower*
Lab Order Number: *WW-211520*
Date Received: *07/07/21*

Comments: DUE BEFORE 8/6/21

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-7 HST A	12:50	07/07/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Kjeldhal Nitrogen	mg/L	0.42	0.60	07/27/21	KB	SM4500-Norg B-C
Total Nitrogen	mg/L	0.45	NA	08/06/21	KB	Calculation
E-coli	CFU/100 mL	25	<1	07/07/21	NB @ 17:00	SM 9213 D
Total Organic Carbon*	mg/L	0.56	0.017	08/02/21	RIA*	SM 5310 C
Total Phosphorous (P)	mg/L	0.040	0.005	08/01/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.42	0.20	07/27/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.57	0.017	08/02/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.15	NA	08/06/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.30	NA	08/06/21	KB	Calculation
Chlorophyll-a	*	5.83	*	07/12/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.025	0.005	07/09/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	BRL	NA	08/06/21	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	BRL	NA	08/06/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.45	NA	08/06/21	KB	Calculation
Nitrate-N	mg/L	0.01	0.02	07/09/21	CLM	SM 4500-NO3 E
Nitrite-N	mg/L	0.02	0.010	07/09/21	CLM	SM 4500-NO2-B
Ammonia-N	mg/L	0.12	0.02	08/02/21	CLM	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: R Ronald Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, August 10, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Harbor Sampling*	***Comments:***	DUE BEFORE 8/6/21
Project Number:			
Sampled By:	*Kim Tower*		
Lab Order Number:	*WW-211521*		
Date Received:	*07/07/21*		

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-8A-HST A	13:00	07/07/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Kjeldhal Nitrogen	mg/L	0.67	0.60	07/27/21	KB	SM4500-Norg B-C
Total Nitrogen	mg/L	0.70	NA	08/06/21	KB	Calculation
E-coli	CFU/100 mL	10	<1	07/07/21	NB @ 17:00	SM 9213 D
Total Organic Carbon*	mg/L	0.64	0.017	08/02/21	RIA*	SM 5310 C
Total Phosphorous (P)	mg/L	0.048	0.005	08/01/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.49	0.20	07/27/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	BRL	0.017	08/02/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.03	NA	08/06/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.49	NA	08/06/21	KB	Calculation
Chlorophyll-a	*	7.01	*	07/12/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.024	0.005	07/09/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	0.64	NA	08/06/21	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.18	NA	08/06/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.51	NA	08/06/21	KB	Calculation
Nitrate-N	mg/L	0.03	0.02	07/09/21	CLM	SM 4500-NO3 E
Nitrite-N	mg/L	BRL	0.010	07/09/21	CLM	SM 4500-NO2-B
Ammonia-N	mg/L	BRL	0.02	08/02/21	CLM	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

ANALYTICAL REPORT

Lab Number:	L2136693
Client:	Envirotech Laboratories, Inc. 8 Jan Sebastian Drive Unit 12 Sandwich, MA 02563
ATTN:	Ron Saari
Phone:	(800) 339-6460
Project Name:	PLYMOUTH ENVIRONMENTAL MGMT
Project Number:	Not Specified
Report Date:	07/29/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: PLYMOUTH ENVIRONMENTAL MGMT
Project Number: Not Specified

Lab Number: L2136693
Report Date: 07/29/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2136693-01	WW-211519	WATER	Not Specified	07/07/21 12:40	07/08/21
L2136693-02	WW-211520	WATER	Not Specified	07/07/21 12:50	07/08/21
L2136693-03	WW-211521	WATER	Not Specified	07/07/21 13:00	07/08/21

Project Name:	PLYMOUTH ENVIRONMENTAL MGMT	**Lab Number:**	L2136693
Project Number:	Not Specified	**Report Date:**	07/29/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	PLYMOUTH ENVIRONMENTAL MGMT	**Lab Number:**	L2136693
Project Number:	Not Specified	**Report Date:**	07/29/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Chlorophyll A

L2136693-01 through -03 was filtered with the method required holding time exceeded.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Sebastian Corbin

Title: Technical Director/Representative Date: 07/29/21

INORGANICS
&
MISCELLANEOUS

Project Name: PLYMOUTH ENVIRONMENTAL MGMT
Project Number: Not Specified

Lab Number: L2136693
Report Date: 07/29/21

SAMPLE RESULTS

Lab ID: L2136693-01
Client ID: WW-211519
Sample Location: Not Specified

Date Collected: 07/07/21 12:40
Date Received: 07/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	3.43		mg/m3	2.00	NA	1	07/09/21 06:00	07/12/21 07:30	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MGMT
Project Number: Not Specified

Lab Number: L2136693
Report Date: 07/29/21

SAMPLE RESULTS

Lab ID: L2136693-02
Client ID: WW-211520
Sample Location: Not Specified

Date Collected: 07/07/21 12:50
Date Received: 07/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	5.83		mg/m3	2.00	NA	1	07/09/21 06:00	07/12/21 07:30	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MGMT
Project Number: Not Specified

Lab Number: L2136693
Report Date: 07/29/21

SAMPLE RESULTS

Lab ID: L2136693-03
Client ID: WW-211521
Sample Location: Not Specified

Date Collected: 07/07/21 13:00
Date Received: 07/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	7.01		mg/m3	2.00	NA	1	07/09/21 06:00	07/12/21 07:30	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MGMT
Project Number: Not Specified

Lab Number: L2136693
Report Date: 07/29/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1522203-1										
Chlorophyll A	ND		mg/m3	2.00	NA	1	07/09/21 06:00	07/12/21 07:30	121,10200H	MT

Lab Duplicate Analysis

Batch Quality Control

Project Name: PLYMOUTH ENVIRONMENTAL MGMT
Project Number: Not Specified

Lab Number: L2136693
Report Date: 07/29/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1522203-2 QC Sample: L2136693-03 Client ID: WW-211521						
Chlorophyll A	7.01	6.27	mg/m3	11		35

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2136693-01A	Brown Plastic 1000ml unpreserved	A	NA		2.2	Y	Absent		CHLORO-A(1)
L2136693-01B	Brown Plastic 1000ml unpreserved	A	NA		2.2	Y	Absent		CHLORO-A(1)
L2136693-02A	Brown Plastic 1000ml unpreserved	A	NA		2.2	Y	Absent		CHLORO-A(1)
L2136693-02B	Brown Plastic 1000ml unpreserved	A	NA		2.2	Y	Absent		CHLORO-A(1)
L2136693-03A	Brown Plastic 1000ml unpreserved	A	NA		2.2	Y	Absent		CHLORO-A(1)
L2136693-03B	Brown Plastic 1000ml unpreserved	A	NA		2.2	Y	Absent		CHLORO-A(1)

*Values in parentheses indicate holding time in days

Project Name: PLYMOUTH ENVIRONMENTAL MGMT **Lab Number:** L2136693

Project Number: Not Specified **Report Date:** 07/29/21

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	PLYMOUTH ENVIRONMENTAL MGMT	**Lab Number:**	L2136693
Project Number:	Not Specified	**Report Date:**	07/29/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

REFERENCES

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D.**

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Envirotech

L2136693

CHAIN OF CUSTODY FORM

ENVIROTECH LABS, INC.
8 Jan Sebastian Dr., Unit 12
Sandwich, MA 02563
(508)888-6460/1-800-339-6460
FAX (508)888-6446

Alpha Analytical

Address: 8 Walkup Drive
Westborough, MA 02346
Phone#: 508-898-9220
Fax #:

Proj. No. | Project Name: Plymouth Environmental Management

Sampler: KT

Lab ID #	Date	Time	Comp	Grab	Sample location	container	Pres.	Sample Type	Analysis Requested
WW-211519	07/07/21	1240			S-10 at 2-4 HST	P	ice	surface water	Chlorophyll-a
WW-211520	07/07/21	1250			S-7 at 2-4 HST	P	ice	surface water	Chlorophyll-a
WW-211521	07/07/21	1300			S-8A at 2-4 HST	P	ice	surface water	Chlorophyll-a

Relinquished:	Date/Time	Received:	Relinquished:	Date/Time	Received:
	7/8/21 13:10	Rob Maestro MC	Rob Maestro	7/8/21	
Rob Maestro MC	7/8/21 19:05	Mike Desmet	7/8/21 1905		

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 7/16/2021
Date Reported: 8/3/2021
P.O. Number 211519 - 211521

Work Order #: 2107-11860

Project Name: PLYMOUTH ENV

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

CHAIN OF CUSTODY FORM

PWS:	Project Name: Plymouth Env.
Sampler:	KT

ENVIROTECH LABS, INC.
8 Jan Sebastian Dr., Unit 12
Sandwich, MA 02563
(508)888-6460
1-800-339-6460
FAX (508)888-6446

RI Analytical
M RI 015
Address 41 Illinois Avenue
Warwick, RI 02888
Phone# 401-737-8500
Fax# 401-738-1970

Lab ID #	Date	Time	Comp	Grab	Station location	Container	Pres.	Sample type	Analysis requested
WW-211519	07/07/21	1230		X	S-10 at 2-4 HST	P	H_2SO_4	Surface water	Total TOC low
						plastic	H_2SO_4	Surface water	Dissolved TOC low
WW-211520	07/07/21	1240		X	S-7 at 2-4 HST	P	H_2SO_4	Surface water	Total TOC low
						plastic	H_2SO_4	Surface water	Dissolved TOC low
WW-211521A	07/07/21	1030		X	S-8A	P	H_2SO_4	Surface water	Total TOC low
						plastic	H_2SO_4	Surface water	Dissolved TOC low
WW-211521B	07/07/21	1600		X	Trip Blank	plastic	H_2SO_4	DI water	Dissolved TOC low

2107-11860

Ammonia-N low level 0.02 mg/L

Relinquished:	Date/Time 7/16/21 1030	Received:	TOC dissolved samples are filtered Contact lab with any exceeded MCL
Relinquished:	Date/Time 7/16/21 1530	Received:	3.0°C

R.I. Analytical Laboratories, Inc.

Laboratory Report

Envirotech Laboratories, Inc.

Work Order #: 2107-11860

Project Name: PLYMOUTH ENV

Sample Number: 001
Sample Description: WW-211519 S-10 AT 2-4 HST
Sample Type : GRAB
Sample Date / Time : 7/07/2021 @ 12:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TOC	<0.50	0.50	mg/l	SM5310C 21 ed.	8/2/2021	12:53	TML
DOC	<0.50	0.50	mg/l	SM5310C 21 ed.	8/2/2021	12:53	TML

Sample Number: 002
Sample Description: WW-211520 S-7 AT 2-4 HST
Sample Type : GRAB
Sample Date / Time : 7/07/2021 @ 12:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TOC	0.56	0.50	mg/l	SM5310C 21 ed.	8/2/2021	12:53	TML
DOC	0.57	0.50	mg/l	SM5310C 21 ed.	8/2/2021	12:53	TML

Sample Number: 003
Sample Description: WW-211521A S-8A
Sample Type : GRAB
Sample Date / Time : 7/07/2021 @ 10:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TOC	0.64	0.50	mg/l	SM5310C 21 ed.	8/2/2021	12:53	TML
DOC	<0.50	0.50	mg/l	SM5310C 21 ed.	8/2/2021	12:53	TML

Sample Number: 004
Sample Description: WW-211521B TRIP BLANK
Sample Type : GRAB
Sample Date / Time : 7/07/2021 @ 16:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
DOC	<0.50	0.50	mg/l	SM5310C 21 ed.	8/2/2021	12:53	TML

CHAIN OF CUSTODY FORM

PWS:	Project Name: Plymouth Env.
Sampler:	KT

ENVIROTECH LABS, INC.
8 Jan Sebastian Dr., Unit 12
Sandwich, MA 02563
(508)888-6460
1-800-339-6460
FAX (508)888-6446

RI Analytical
M RI 015
Address 41 Illinois Avenue
Warwick, RI 02888
Phone# 401-737-8500
Fax# 401-738-1970

Lab ID #	Date	Time	Comp	Grab	Station location	Container	Pres.	Sample type	Analysis requested
WW-211519	07/07/21	1230		X	S-10 at 2-4 HST	P	H_2SO_4	Surface water	Total TOC low
						plastic	H_2SO_4	Surface water	Dissolved TOC low
WW-211520	07/07/21	1240		X	S-7 at 2-4 HST	P	H_2SO_4	Surface water	Total TOC low
						plastic	H_2SO_4	Surface water	Dissolved TOC low
WW-211521A	07/07/21	1030		X	S-8A	P	H_2SO_4	Surface water	Total TOC low
						plastic	H_2SO_4	Surface water	Dissolved TOC low
WW-211521B	07/07/21	1600		X	Trip Blank	plastic	H_2SO_4	DI water	Dissolved TOC low

Ammonia-N low level 0.02 mg/L

Relinquished:	Date/Time 7/16/21 1038	Received:
Relinquished:	Date/Time	Received:

TOC dissolved samples are filtered
Contact lab with any exceeded MCL

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine and Environmental Affairs
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Harbor Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

8/6 FRI

NEED RESULTS FOR PERMITTING DEADLINE BY END OF FIRST WEEK IN AUGUST

WW-211519

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
7/7/2021	1240	S-10 HST	1	1 Liter Plastic	Dissolved TKN, TOC diss low,TDS	NONE
7/7/2021		S-10 HST	1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
7/7/2021		S-10 HST	1	500mL Plastic	NO2, NO3	None
7/7/2021		S-10 HST	1	Glass	Ortho	NONE
7/7/2021		S-10 HST	1	Plastic	Bacteria e-coli 20	Sterile
7/7/2021		S-10 HST	2	1 Liter Amber Plastic	Chlorophyll-a	NONE
7/7/2021	1250	S-7 HST	1	1 Liter Plastic	Dissolved TKN, TOC diss low,TDS	NONE
7/7/2021		S-7 HST	1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
7/7/2021		S-7 HST	1	500mL Plastic	NO2, NO3	None
7/7/2021		S-7 HST	1	Glass	Ortho	NONE
7/7/2021		S-7 HST	1	Plastic	Bacteria e-coli 15	Sterile
7/7/2021		S-7 HST	2	1 Liter Amber Plastic	Chlorophyll-a	NONE

1520

NO TOC Low in Access

1720 NB

NOTE: **Analysis needed for reporting in lowest detection possible**; O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Kjeldahl Nitrogen, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Bacteria E-coli, Chlorophyll-a

Relinquished By: Date/Time
7/7/21 1:40

Received By: Date/Time:
07/07/21 1345

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine and Environmental Affairs
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Harbor Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

8/6 FRI

NEED RESULTS FOR PERMITTING DEADLINE BY END OF FIRST WEEK IN AUGUST

WW-211521

no TOC low in Access

1700 NB

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
7/7/2021	1300	S-8A HST	1	1 Liter Plastic	Dissolved TKN, TOC diss low,TDS	NONE
7/7/2021		S-8A HST	1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
7/7/2021		S-8A HST	1	500mL Plastic	NO2, NO3	None
7/7/2021		S-8A HST	1	Glass	Ortho	NONE
7/7/2021		S-8A HST	1	Plastic	Bacteria e-coli 10	Sterile
7/7/2021		S-8A HST	2	1 Liter Amber Plastic	Chlorophyll-a	NONE
			1	1 Liter Plastic	Dissolved TKN, TOC diss low,TDS	NONE
			1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
			1	500mL Plastic	NO2, NO3	None
			1	Glass	Ortho	NONE
			1	Plastic	Bacteria e-coli	Sterile
			2	1 Liter Amber Plastic	Chlorophyll-a	NONE

NOTE: **Analysis needed for reporting in lowest detection possible**; O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Kjeldahl Nitrogen, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Bacteria E-coli, Chlorophyll-a

Relinquished By: Date/Time
KTow 7/7/21 1:40

Received By: Date/Time:
07/07/21 1345

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Friday, September 10, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Harbor Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211812*	
Date Received:	*08/05/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-10 2-4 HST A	12:05	08/05/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Kjeldhal Nitrogen	mg/L	0.51	0.60	08/27/21	KB	SM4500-Norg B-C
Ammonia-N	mg/L	<0.50	0.50	09/05/21	KB	SM4500 NH3 C
Total Nitrogen	mg/L	0.51	NA	09/10/21	KB	Calculation
Total Organic Carbon*	mg/L	0.58	0.017	08/24/21	RIA*	SM 5310 C
Total Phosphorous (P)	mg/L	0.052	0.005	08/20/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.34	0.20	08/27/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	BRL	0.017	08/24/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	<0.51	NA	09/09/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.34	NA	09/09/21	KB	Calculation
Chlorophyll-a	*	8.15	*	08/07/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.041	0.005	08/07/21	KB	SM 4500-P
Particulate Organic Carbon	mg/L	<0.58	NA	09/09/21	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.17	NA	08/27/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.34	NA	09/09/21	KB	Calculation
Nitrate-N	mg/L	BRL	0.02	09/10/21	CLM	SM 4500-NO3 E
Nitrite-N	mg/L	BRL	0.010	09/10/21	CLM	SM 4500-NO2-B
E coli x10	CFU/100mL	70	10	08/05/21	NB @ 15:45	EPA 1603

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Friday, September 10, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Harbor Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211825*	
Date Received:	*08/05/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S--7-2-4-HST A	12:10	08/05/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Kjeldhal Nitrogen	mg/L	0.51	0.60	08/27/21	KB	SM4500-Norg B-C
Ammonia-N	mg/L	<0.50	0.50	09/05/21	KB	SM4500 NH3 C
Total Nitrogen	mg/L	0.51	NA	09/10/21	KB	Calculation
Total Organic Carbon*	mg/L	0.52	0.017	08/24/21	RIA*	SM 5310 C
Total Phosphorous (P)	mg/L	0.063	0.005	08/20/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.45	0.20	08/27/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.54	0.017	08/24/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	<0.51	NA	09/09/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.45	NA	09/09/21	KB	Calculation
Chlorophyll-a	*	6.26	*	08/09/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.039	0.005	08/07/21	KB	SM 4500-P
Particulate Organic Carbon	mg/L	ND	NA	09/09/21	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.06	NA	08/24/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.45	NA	09/09/21	KB	Calculation
Nitrate-N	mg/L	BRL	0.02	09/10/21	CLM	SM 4500-NO3 E
Nitrite-N	mg/L	BRL	0.010	09/10/21	CLM	SM 4500-NO2-B
E coli x10	CFU/100mL	400	10	08/05/21	NB @ 15:45	EPA 1603

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: R Ronald Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Friday, September 10, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Harbor Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Tower*	
Lab Order Number:	*WW-211813*	
Date Received:	*08/05/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S 8A 2-4 HST A	12:15	08/05/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Kjeldhal Nitrogen	mg/L	0.57	0.60	08/27/21	KB	SM4500-Norg B-C
Ammonia-N	mg/L	<0.50	0.50	09/05/21	KB	SM4500 NH3 C
Total Nitrogen	mg/L	0.57	NA	09/10/21	KB	Calculation
Total Organic Carbon*	mg/L	0.54	0.017	08/24/21	RIA*	SM 5310 C
Total Phosphorous (P)	mg/L	0.064	0.005	08/20/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.54	0.20	08/27/21	KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.55	0.017	08/24/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	<0.51	NA	09/09/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.54	NA	09/09/21	KB	Calculation
Chlorophyll-a	*	7.04	*	08/09/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.042	0.005	08/07/21	KB	SM 4500-P
Particulate Organic Carbon	mg/L	ND	NA	09/09/21	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.03	NA	08/27/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.54	NA	09/09/21	KB	Calculation
Nitrate-N	mg/L	BRL	0.02	09/10/21	CLM	SM 4500-NO3 E
Nitrite-N	mg/L	BRL	0.010	09/10/21	CLM	SM 4500-NO2-B
E coli x10	CFU/100mL	>400	10	08/05/21	NB @ 15:45	EPA 1603

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

ANALYTICAL REPORT

Lab Number:	L2142192
Client:	Envirotech Laboratories, Inc. 8 Jan Sebastian Drive Unit 12 Sandwich, MA 02563
ATTN:	Ron Saari
Phone:	(800) 339-6460
Project Name:	PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number:	Not Specified
Report Date:	08/13/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2142192
Report Date: 08/13/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2142192-01	WW-211812	WATER	Not Specified	08/05/21 12:05	08/06/21
L2142192-02	WW-211825	WATER	Not Specified	08/05/21 12:10	08/06/21
L2142192-03	WW-211813	WATER	Not Specified	08/05/21 12:15	08/06/21

Project Name:	PLYMOUTH ENVIRONMENTAL MANAGEM	**Lab Number:**	L2142192
Project Number:	Not Specified	**Report Date:**	08/13/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Chlorophyll A

L2142192-01 through -03 was filtered with the method required holding time exceeded.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Sebastian Corbin

Title: Technical Director/Representative

Date: 08/13/21

INORGANICS
&
MISCELLANEOUS

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2142192
Report Date: 08/13/21

SAMPLE RESULTS

Lab ID: L2142192-01
Client ID: WW-211812
Sample Location: Not Specified

Sample Depth:
Matrix: Water

Date Collected: 08/05/21 12:05
Date Received: 08/06/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	8.15		mg/m3	2.00	NA	1	08/07/21 14:47	08/09/21 07:50	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2142192
Report Date: 08/13/21

SAMPLE RESULTS

Lab ID: L2142192-02
Client ID: WW-211825
Sample Location: Not Specified

Date Collected: 08/05/21 12:10
Date Received: 08/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	6.26		mg/m3	2.00	NA	1	08/07/21 14:47	08/09/21 07:50	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2142192
Report Date: 08/13/21

SAMPLE RESULTS

Lab ID: L2142192-03
Client ID: WW-211813
Sample Location: Not Specified

Date Collected: 08/05/21 12:15
Date Received: 08/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	7.04		mg/m3	2.00	NA	1	08/07/21 14:47	08/09/21 07:50	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANA
Project Number: Not Specified

Lab Number: L2142192
Report Date: 08/13/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1532858-1										
Chlorophyll A	ND		mg/m3	2.00	NA	1	08/07/21 14:47	08/09/21 07:50	121,10200H	MT

Lab Duplicate Analysis

Batch Quality Control

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2142192
Report Date: 08/13/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1532858-2 QC Sample: L2142192-01 Client ID: WW-211812						
Chlorophyll A	8.15	8.86	mg/m3	8		35

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2142192-01A	Brown Plastic 1000ml unpreserved	A	NA		4.9	Y	Absent		CHLORO-A(1)
L2142192-01B	Brown Plastic 1000ml unpreserved	A	NA		4.9	Y	Absent		CHLORO-A(1)
L2142192-02A	Brown Plastic 1000ml unpreserved	A	NA		4.9	Y	Absent		CHLORO-A(1)
L2142192-02B	Brown Plastic 1000ml unpreserved	A	NA		4.9	Y	Absent		CHLORO-A(1)
L2142192-03A	Brown Plastic 1000ml unpreserved	A	NA		4.9	Y	Absent		CHLORO-A(1)
L2142192-03B	Brown Plastic 1000ml unpreserved	A	NA		4.9	Y	Absent		CHLORO-A(1)

*Values in parentheses indicate holding time in days

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	PLYMOUTH ENVIRONMENTAL MANAGEM	**Lab Number:**	L2142192
Project Number:	Not Specified	**Report Date:**	08/13/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

REFERENCES

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

L2142192

CHAIN OF CUSTODY FORM

ENVIROTECH LABS, INC.
8 Jan Sebastian Dr., Unit 12
Sandwich, MA 02563
(508)888-6460/1-800-339-6460
FAX (508)888-6446

Alpha Analytical
Address: 8 Walkup Drive
Westborough, MA 02346
Phone#: 508-898-9220
Fax #:

Proj. No. | Project Name: Plymouth Environmental Management

Sampler: KT

Lab ID #	Date	Time	Comp	Grab	Sample location	container	Pres.	Sample Type	Analysis Requested
WW-211812	08/05/21	1205		x	S-10 at 2-4 HST	P	ice	surface water	Chlorophyll-a
WW-211825	08/05/21	1210		x	S-7 at 2-4 HST	P	ice	surface water	Chlorophyll-a
WW-211813	08/05/21	1215		x	S-8A at 2-4 HST	P	ice	surface water	Chlorophyll-a

Relinquished:	Date/Time	Received:	Reliquished:	Date/Time	Received:
	8/6/21 1000				
Relinquished:	Date/Time	Received:	Relinquished:	Date/Time	Received:

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 8/20/2021
Date Reported: 8/25/2021
P.O. Number WW-211812.825.813

Work Order #: 2108-14282

Project Name: PLYMOUTH ENV. - WW-211812, WW-211825, WW-211813

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

R.I. Analytical Laboratories, Inc.

Laboratory Report

Envirotech Laboratories, Inc.

Work Order #: 2108-14282

Project Name: PLYMOUTH ENV. - WW-211812, WW-211825, WW-211813

Sample Number: 001
Sample Description: WW-211812A S-10 AT 2-4 HST
Sample Type : GRAB
Sample Date / Time : 8/05/2021 @ 12:05

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
TOC	0.58	0.50	mg/l	SM5310C 21 ed.	8/24/2021 6:00	KPG

Sample Number: 002
Sample Description: WW-211812B S-10 AT 2-4 HST
Sample Type : GRAB
Sample Date / Time : 8/05/2021 @ 12:05

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
DOC	<0.50	0.50	mg/l	SM5310C 21 ed.	8/24/2021 6:00	KPG

Sample Number: 003
Sample Description: WW-211825A S-7 AT 2-4 HST
Sample Type : GRAB
Sample Date / Time : 8/05/2021 @ 12:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
TOC	0.52	0.50	mg/l	SM5310C 21 ed.	8/24/2021 6:00	KPG

Sample Number: 004
Sample Description: WW-211825B S-7 AT 2-4 HST
Sample Type : GRAB
Sample Date / Time : 8/05/2021 @ 12:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
DOC	0.54	0.50	mg/l	SM5310C 21 ed.	8/24/2021 6:00	KPG

R.I. Analytical Laboratories, Inc.

Laboratory Report

Envirotech Laboratories, Inc.

Work Order #: 2108-14282

Project Name: PLYMOUTH ENV. - WW-211812, WW-211825, WW-211813

Sample Number: 005
Sample Description: WW-211813A S-8A
Sample Type : GRAB
Sample Date / Time : 8/05/2021 @ 12:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
TOC	0.54	0.50	mg/l	SM5310C 21 ed.	8/24/2021 6:00	KPG

Sample Number: 006
Sample Description: WW-211813B S-8A
Sample Type : GRAB
Sample Date / Time : 8/05/2021 @ 12:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
DOC	0.55	0.50	mg/l	SM5310C 21 ed.	8/24/2021 6:00	KPG

Sample Number: 007
Sample Description: WW-211813C FILTER BLANK
Sample Type : GRAB
Sample Date / Time : 8/05/2021 @ 12:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
TOC	<0.50	0.50	mg/l	SM5310C 21 ed.	8/24/2021 6:00	KPG

CHAIN OF CUSTODY FORM

PWS:	Project Name: Plymouth Env.
Sampler:	KT

ENVIROTECH LABS, INC.
8 Jan Sebastian Dr., Unit 12
Sandwich, MA 02563
(508)888-6460
1-800-339-6460
FAX (508)888-6446

RI Analytical
M RI 015
Address 41 Illinois Avenue
Warwick, RI 02888
Phone# 401-737-8500
Fax# 401-738-1970

Lab ID #	Date	Time	Comp	Grab	Station location	Container	Pres.	Sample type	Analysis requested
WW-211812 A	08/05/21	1205		X	S-10 at 2-4 HST	P	H_2SO_4	Surface water	Total TOC low
B						plastic	H_2SO_4	Surface water	Dissolved TOC low
WW-211825 A	08/05/21	1210		X	S-7 at 2-4 HST	P	H_2SO_4	Surface water	Total TOC low
B						plastic	H_2SO_4	Surface water	Dissolved TOC low
WW-211813 A	08/05/21	1215		X	S-8A	P	H_2SO_4	Surface water	Total TOC low
B						plastic	H_2SO_4	Surface water	Dissolved TOC low
C					Filter Blank				~~Filter Blank~~ Total TOC low

~~Ammonia-N low level 0.02 mg/L~~

2/08-14282

Relinquished:	Date/Time 08/20/21 1129	Received:	TOC dissolved samples are filtered Contact lab with any exceeded MCL
Relinquished: MEK	Date/Time 8/20/21 1630	Received:	MEK 3.8°C

WW 211812 L

SCANNED

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine and Environmental Affairs
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Harbor Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

NEED RESULTS FOR PERMITTING DEADLINE BY END OF FIRST WEEK IN SEPTEMBER

A

211812

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
8/5/2021	1205	S-10 2-4 HST	1	1 Liter Plastic	Dissolved TKN, TOC diss low,TDS	NONE
8/5/2021		S-10 2-4 HST	1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
8/5/2021		S-10 2-4 HST	1	500mL Plastic	NO2, NO3	None
8/5/2021		S-10 2-4 HST	1	Glass	Ortho	NONE
8/5/2021		S-10 2-4 HST	1	Plastic	Bacteria e-coli	Sterile
8/5/2021		S-10 2-4 HST	2	1 Liter Amber Plastic	Chlorophyll-a	NONE
8/5/2021	1210	S-7 2-4 HST	1	1 Liter Plastic	Dissolved TKN, TOC diss low,TDS	NONE
8/5/2021		S-7 2-4 HST	1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
8/5/2021		S-7 2-4 HST	1	500mL Plastic	NO2, NO3	None
8/5/2021		S-7 2-4 HST	1	Glass	Ortho	NONE
8/5/2021		S-7 2-4 HST	1	Plastic	Bacteria e-coli	Sterile
8/5/2021		S-7 2-4 HST	2	1 Liter Amber Plastic	Chlorophyll-a	NONE

70 1545 NB

~~B~~ ~~211812~~ WW 211825

7400 1545 NB

NOTE: **Analysis needed for reporting in lowest detection possible**; O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Kjeldahl Nitrogen, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Bacteria E-coli, Chlorophyll-a

Relinquished By:	Date/Time	Received By:	Date/Time:
Kim Tow	8/5/21 1:25		8/5/21 1325

WW 211813 L

SCANNED

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine and Environmental Affairs
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Harbor Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

NEED RESULTS FOR PERMITTING DEADLINE BY END OF FIRST WEEK IN SEPTEMBER

WW 211813

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
8/5/2021	1215	S-8A 2-4 HST	1	1 Liter Plastic	Dissolved TKN, TOC diss low,TDS	NONE
8/5/2021		S-8A 2-4 HST	1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
8/5/2021		S-8A 2-4 HST	1	500mL Plastic	NO2, NO3	None
8/5/2021		S-8A 2-4 HST	1	Glass	Ortho	NONE
8/5/2021		S-8A 2-4 HST	1	Plastic	Bacteria e-coli	Sterile
8/5/2021		S-8A 2-4 HST	2	1 Liter Amber Plastic	Chlorophyll-a	NONE
			1	1 Liter Plastic	Dissolved TKN, TOC diss low,TDS	NONE
			1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
			1	500mL Plastic	NO2, NO3	None
			1	Glass	Ortho	NONE
			1	Plastic	Bacteria e-coli	Sterile
			2	1 Liter Amber Plastic	Chlorophyll-a	NONE

400
1545 MB

NOTE: **Analysis needed for reporting in lowest detection possible**; O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Kjeldahl Nitrogen, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Bacteria E-coli, Chlorophyll-a

Relinquished By:	Date/Time	Received By:	Date/Time:
Kim Tow	8/5/21 1:25		8/5/21 13:25

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Friday, October 8, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Harbor Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Towers*	
Lab Order Number:	*WW-212049*	
Date Received:	*09/01/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-10 Ebb Tide A	08:15	09/01/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	0.21	0.62	10/07/21	MS/KB	Calculation
Total Organic Carbon*	mg/L	0.60	0.017	09/09/21	RIA*	SM 5310 C
Total Kjeldhal Nitrogen	mg/L	0.21	0.2	10/06/21	MS/KB	SM4500-Norg B-C
Total Phosphorous (P)	mg/L	0.108	0.005	09/18/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	10/06/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.53	0.017	09/09/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	<0.05	NA	10/07/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.16	NA	10/07/21	KB	Calculation
Chlorophyll-a	*	5.56	*	09/03/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.04	0.005	09/12/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	0.07	NA	10/07/21	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.21	NA	10/07/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	<0.23	NA	10/07/21	MS/KB	Calculation
E coli	CFU/100ml	5	5	09/01/21	KF @ 15:30	EPA 1603
Nitrate-N	mg/L	BRL	0.02	09/02/21	CLM	SM 4500-NO3 E
Nitrite-N	mg/L	BRL	0.010	09/02/21	CLM	SM 4500-NO2-B
Ammonia-N	mg/L	0.04	0.02	10/04/21	CLM	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Friday, October 8, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Harbor Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Towers*	
Lab Order Number:	*WW-212050*	
Date Received:	*09/01/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-7 Ebb Tide A	08:35	09/01/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	0.56	0.62	10/07/21	MS/KB	Calculation
Total Organic Carbon*	mg/L	0.72	0.017	09/09/21	RIA*	SM 5310 C
Total Kjeldhal Nitrogen	mg/L	0.56	0.2	10/06/21	MS/KB	SM4500-Norg B-C
Total Phosphorous (P)	mg/L	0.062	0.005	09/18/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.32	0.20	10/06/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.62	0.017	09/09/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	<0.21	NA	10/07/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.12	NA	10/07/21	KB	Calculation
Chlorophyll-a	*	16.1	*	09/03/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.047	0.005	09/24/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	0.10	NA	10/07/21	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.24	NA	10/07/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.32	NA	10/07/21	KB	Calculation
E coli	CFU/100ml	5	5	09/01/21	KF @ 15:30	EPA 1603
Nitrate-N	mg/L	BRL	0.02	09/02/21	CLM	SM 4500-NO3 E
Nitrite-N	mg/L	BRL	0.010	09/02/21	CLM	SM 4500-NO2-B
Ammonia-N	mg/L	0.20	0.02	10/04/21	CLM	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald J. Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Friday, October 8, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Harbor Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Towers*	
Lab Order Number:	*WW-212051*	
Date Received:	*09/01/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-10 2-4 HST A	10:05	09/01/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	0.35	0.62	10/07/21	MS/KB	Calculation
Total Organic Carbon*	mg/L	0.53	0.017	09/09/21	RIA*	SM 5310 C
Total Kjeldhal Nitrogen	mg/L	0.35	0.2	10/06/21	MS/KB	SM4500-Norg B-C
Total Phosphorous (P)	mg/L	0.047	0.005	09/18/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	10/06/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.52	0.017	09/09/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	<0.04	NA	10/07/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.17	NA	10/07/21	KB	Calculation
Chlorophyll-a	*	14.0	*	09/03/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.043	0.005	09/24/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	0.01	NA	10/07/21	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.35	NA	10/07/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	<0.23	NA	10/07/21	KB	Calculation
E coli	CFU/100ml	<5	5	09/01/21	KF @ 15:30	EPA 1603
Nitrate-N	mg/L	BRL	0.02	09/02/21	CLM	SM 4500-NO3 E
Nitrite-N	mg/L	BRL	0.010	09/02/21	CLM	SM 4500-NO2-B
Ammonia-N	mg/L	0.033	0.02	10/04/21	CLM	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: R Ronald Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Friday, October 8, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Harbor Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Towers*	
Lab Order Number:	*WW-212052*	
Date Received:	*09/01/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-7 2-4 HST A	10:20	09/01/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	0.25	0.62	10/07/21	MS/KB	Calculation
Total Organic Carbon*	mg/L	0.52	0.017	09/09/21	RIA*	SM 5310 C
Total Kjeldhal Nitrogen	mg/L	0.25	0.2	10/06/21	MS/KB	SM4500-Norg B-C
Total Phosphorous (P)	mg/L	0.041	0.005	09/18/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.25	0.20	10/06/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.61	0.017	09/09/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	<0.08	NA	10/07/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.18	NA	10/07/21	KB	Calculation
Chlorophyll-a	*	13.2	*	09/03/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.037	0.005	09/24/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	BRL	NA	10/07/21	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	BRL	NA	10/07/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.25	NA	10/07/21	KB	Calculation
E coli	CFU/100ml	25	5	09/01/21	KF @ 15:30	EPA 1603
Nitrate-N	mg/L	BRL	0.02	09/02/21	CLM	SM 4500-NO3 E
Nitrite-N	mg/L	BRL	0.010	09/02/21	CLM	SM 4500-NO2-B
Ammonia-N	mg/L	0.07	0.02	10/04/21	CLM	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari

Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, October 13, 2021

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName:	*Harbor Sampling*	***Comments:***
Project Number:		
Sampled By:	*Kim Towers*	
Lab Order Number:	*WW-212053*	
Date Received:	*09/01/21*	

Sample Type	***Sample Time***	***Sample Date***	***Comments***			
S-8A 2-4 HST A	10:30	09/01/21				
Parameters	***Units***	***Test Results***	***Reportable Limits***	***Date Analyzed***	***Analyst***	***Method***
Total Nitrogen	mg/L	0.35	NA	10/07/21	MS/KB	Calculation
Total Organic Carbon*	mg/L	0.59	0.017	09/09/21	RIA*	SM 5310 C
Total Kjeldhal Nitrogen	mg/L	0.35	0.2	10/06/21	MS/KB	SM4500-Norg B-C
Total Phosphorous (P)	mg/L	0.041	0.005	09/18/21	KB	SM 4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.20	10/07/21	MS/KB	SM4500 Norg B-C
Dissolved Total Organic Carbon	mg/L	0.55	0.017	09/09/21	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	<0.16	NA	10/07/21	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.05	NA	10/07/21	KB	Calculation
Chlorophyll-a	*	11.5	*	09/03/21	Alpha*	*
Ortho Phosphorous (P)	mg/L	0.04	0.005	09/24/21	CLM	SM 4500-P
Particulate Organic Carbon	mg/L	0.04	NA	10/07/21	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.20	NA	10/07/21	KB	Calculation
Total Dissolved Nitrogen	mg/L	<0.23	NA	10/07/21	KB	Calculation
E coli	CFU/100ml	60	5	09/01/21	KF @ 15:30	EPA 1603
Nitrate-N	mg/L	BRL	0.02	09/02/21	CLM	SM 4500-NO3 E
Nitrite-N	mg/L	BRL	0.010	09/02/21	CLM	SM 4500-NO2-B
Ammonia-N	mg/L	0.15	0.02	10/04/21	CLM	10-107-06-05-J

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results.

We certify that the following results are true and accurate to the best of our knowledge.

BRL=below reportable limits

****see attached***

By: Ronald Saari
Ronald J. Saari
Laboratory Director

R.I. ANALYTICAL
Specialists in Environmental Services

LABORATORY REPORT

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 9/8/2021
Date Reported: 9/13/2021
P.O. Number WW-212049-53

Work Order #: 2109-15217

Project Name: PLYMOUTH ENV.

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:

Nicole Skyleson

Nicole Skyleson
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):
Warwick RI * RI LAI00033, MA M-RI015, CT PH-0508

R.I. Analytical Laboratories, Inc.

Laboratory Report

Envirotech Laboratories, Inc.

Work Order #: 2109-15217

Project Name: PLYMOUTH ENV.

Sample Number: 001
Sample Description: WW-212049 - S-10 AT EBB TIDE
Sample Type : GRAB
Sample Date / Time : 9/01/2021 @ 08:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TOC	0.60	0.50	mg/l	SM5310C 21 ed.	9/9/2021	23:11	TML
DOC	0.53	0.50	mg/l	SM5310C 21 ed.	9/9/2021	23:11	TML

Sample Number: 002
Sample Description: WW-212050 - S-7 AT EBB TIDE
Sample Type : GRAB
Sample Date / Time : 9/01/2021 @ 08:35

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TOC	0.72	0.50	mg/l	SM5310C 21 ed.	9/9/2021	23:11	TML
DOC	0.62	0.50	mg/l	SM5310C 21 ed.	9/9/2021	23:11	TML

Sample Number: 003
Sample Description: WW-212051 - S-10 AT 2-4 HST
Sample Type : GRAB
Sample Date / Time : 9/01/2021 @ 10:05

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TOC	0.53	0.50	mg/l	SM5310C 21 ed.	9/9/2021	23:11	TML
DOC	0.52	0.50	mg/l	SM5310C 21 ed.	9/9/2021	23:11	TML

Sample Number: 004
Sample Description: WW-212052 - S-7 AT 2-4 HST
Sample Type : GRAB
Sample Date / Time : 9/01/2021 @ 10:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TOC	0.52	0.50	mg/l	SM5310C 21 ed.	9/9/2021	23:11	TML
DOC	0.61	0.50	mg/l	SM5310C 21 ed.	9/9/2021	23:11	TML

Dissolved Organic Carbon result is higher than Total Organic Carbon result however results are within duplicate criteria.

R.I. Analytical Laboratories, Inc.

Laboratory Report

Envirotech Laboratories, Inc.

Work Order #: 2109-15217

Project Name: PLYMOUTH ENV.

Sample Number: 005
Sample Description: WW-212053 - S-8A AT 2-4 HST
Sample Type : GRAB
Sample Date / Time : 9/01/2021 @ 10:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED		ANALYST
TOC	0.59	0.50	mg/l	SM5310C 21 ed.	9/9/2021	23:11	TML
DOC	0.55	0.50	mg/l	SM5310C 21 ed.	9/9/2021	23:11	TML

CHAIN OF CUSTODY FORM

PWS:	Project Name: Plymouth Env.
Sampler:	KT

ENVIROTECH LABS, INC.
8 Jan Sebastian Dr., Unit 12
Sandwich, MA 02563
(508)888-6460
1-800-339-6460
FAX (508)888-6446

RI Analytical
M RI 015
Address 41 Illinois Avenue
Warwick, RI 02888
Phone# 401-737-8500
Fax# 401-738-1970

Lab ID #	Date	Time	Comp	Grab	Station location	Container	Pres.	Sample type	Analysis requested
WW-212049	09/01/21	0815		X	S-10 at Ebb Tide	P	H_2SO_4	Surface water	Total TOC low
						plastic	H_2SO_4	Surface water	Dissolved TOC low
WW-212050	09/01/21	0835		X	S-7 at Ebb Tide	P	H_2SO_4	Surface water	Total TOC low
						plastic	H_2SO_4	Surface water	Dissolved TOC low
WW-212051	09/01/21	1005		X	S-10 at 2-4 HST	P	H_2SO_4	Surface water	Total TOC low
						plastic	H_2SO_4	Surface water	Dissolved TOC low
WW-212052	09/01/21	1020		X	S-7 at 2-4 HST	P	H_2SO_4	Surface water	Total TOC low
						plastic	H_2SO_4	Surface water	Dissolved TOC low
WW-212053	09/01/21	1030		X	S-8A at 2-4 HST	P	H_2SO_4	Surface water	Total TOC low
						plastic	H_2SO_4	Surface water	Dissolved TOC low

Ammonia-N low level 0.02 mg/L

Relinquished: KV	Date/Time 09/01/21 1143	Received: MLA (10)	TOC dissolved samples are filtered Contact lab with any exceeded MCL
Relinquished: MLA	Date/Time 9/8/21 1655	Received:	MLA 4.3°C

2109-1527

ANALYTICAL REPORT

Lab Number:	L2147249
Client:	Envirotech Laboratories, Inc. 8 Jan Sebastian Drive Unit 12 Sandwich, MA 02563
ATTN:	Ron Saari
Phone:	(800) 339-6460
Project Name:	PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number:	Not Specified
Report Date:	09/08/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2147249
Report Date: 09/08/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2147249-01	WW-212049	WATER	Not Specified	09/01/21 08:15	09/02/21
L2147249-02	WW-212050	WATER	Not Specified	09/01/21 08:35	09/02/21
L2147249-03	WW-212051	WATER	Not Specified	09/01/21 10:05	09/02/21
L2147249-04	WW-212052	WATER	Not Specified	09/01/21 10:20	09/02/21
L2147249-05	WW-212053	WATER	Not Specified	09/01/21 10:30	09/02/21

Project Name:	PLYMOUTH ENVIRONMENTAL MANAGEM	**Lab Number:**	L2147249
Project Number:	Not Specified	**Report Date:**	09/08/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L2147249-01: The sample identified as "WW-212049" on the chain of custody was identified as "DW-212049" on the container label. At the client's request, the sample is reported as "WW-212049".

L2147249-02: The sample identified as "WW-212050" on the chain of custody was identified as "DW-212050" on the container label. At the client's request, the sample is reported as "WW-212050".

L2147249-03: The sample identified as "WW-212051" on the chain of custody was identified as "DW-212051" on the container label. At the client's request, the sample is reported as "WW-212051".

L2147249-04: The sample identified as "WW-212052" on the chain of custody was identified as "DW-212052" on the container label. At the client's request, the sample is reported as "WW-212052".

L2147249-05: The sample identified as "WW-212053" on the chain of custody was identified as "DW-212053" on the container label. At the client's request, the sample is reported as "WW-212053".

Chlorophyll A

L2147249-01 through -05 were analyzed with the method required holding time exceeded.

The WG1542699-2 Laboratory Duplicate RPD for chlorophyll a (55%), performed on L2147249-05, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Jennifer L Clements

Title: Technical Director/Representative

Date: 09/08/21

INORGANICS
&
MISCELLANEOUS

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2147249
Report Date: 09/08/21

SAMPLE RESULTS

Lab ID: L2147249-01
Client ID: WW-212049
Sample Location: Not Specified

Sample Depth:
Matrix: Water

Date Collected: 09/01/21 08:15
Date Received: 09/02/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	5.56		mg/m3	2.00	NA	1	09/03/21 07:45	09/03/21 09:25	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2147249
Report Date: 09/08/21

SAMPLE RESULTS

Lab ID: L2147249-02
Client ID: WW-212050
Sample Location: Not Specified

Date Collected: 09/01/21 08:35
Date Received: 09/02/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	16.1		mg/m3	2.00	NA	1	09/03/21 07:45	09/03/21 09:25	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2147249
Report Date: 09/08/21

SAMPLE RESULTS

Lab ID: L2147249-03
Client ID: WW-212051
Sample Location: Not Specified

Sample Depth:
Matrix: Water

Date Collected: 09/01/21 10:05
Date Received: 09/02/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	14.0		mg/m3	2.00	NA	1	09/03/21 07:45	09/03/21 09:25	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2147249
Report Date: 09/08/21

SAMPLE RESULTS

Lab ID: L2147249-04
Client ID: WW-212052
Sample Location: Not Specified

Date Collected: 09/01/21 10:20
Date Received: 09/02/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	13.2		mg/m3	2.00	NA	1	09/03/21 07:45	09/03/21 09:25	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2147249
Report Date: 09/08/21

SAMPLE RESULTS

Lab ID: L2147249-05
Client ID: WW-212053
Sample Location: Not Specified

Date Collected: 09/01/21 10:30
Date Received: 09/02/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	11.5		mg/m3	2.00	NA	1	09/03/21 07:45	09/03/21 09:25	121,10200H	MT

Project Name: PLYMOUTH ENVIRONMENTAL MANA(
Project Number: Not Specified

Lab Number: L2147249
Report Date: 09/08/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-05 Batch: WG1542699-1										
Chlorophyll A	ND		mg/m3	2.00	NA	1	09/03/21 07:45	09/03/21 09:25	121,10200H	MT

Lab Duplicate Analysis

Batch Quality Control

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L2147249
Report Date: 09/08/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG1542699-2 QC Sample: L2147249-05 Client ID: WW-212053						
Chlorophyll A	11.5	6.52	mg/m3	**55**	Q	35

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2147249-01A	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)
L2147249-01B	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)
L2147249-02A	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)
L2147249-02B	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)
L2147249-03A	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)
L2147249-03B	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)
L2147249-04A	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)
L2147249-04B	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)
L2147249-05A	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)
L2147249-05B	Brown Plastic 1000ml unpreserved	A	NA		4.5	Y	Absent		CHLORO-A(1)

*Values in parentheses indicate holding time in days

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	PLYMOUTH ENVIRONMENTAL MANAGEM	**Lab Number:**	L2147249
Project Number:	Not Specified	**Report Date:**	09/08/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified
Lab Number: L2147249
Report Date: 09/08/21

REFERENCES

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

L2147249

CHAIN OF CUSTODY FORM

Proj. No.	Project Name: Plymouth Environmental Management
Sampler:	KT

ENVIROTECH LABS, INC.
8 Jan Sebastian Dr., Unit 12
Sandwich, MA 02563
(508)888-6460/1-800-339-6460
FAX (508)888-6446

Alpha Analytical
Address: 8 Walkup Drive
Westborough, MA 02346
Phone#: 508-898-9220
Fax #:

Lab ID #	Date	Time	Comp	Grab	Sample location	container	Pres.	Sample Type	Analysis Requested
WW-212049	09/01/21	0815		x	S-10 Ebb Tide	P	ice	surface water	Chlorophyll-a
WW-212050	09/01/21	0835		x	S-7 Ebb Tide	P	ice	surface water	Chlorophyll-a
WW-212051	09/01/21	1005		x	S-10 2-4 HST	P	ice	surface water	Chlorophyll-a
WW-212052	09/01/21	1020		x	S-7 2-4 HST	P	ice	surface water	Chlorophyll-a
WW-212053	09/01/21	1030		x	S-8A 2-4 HST	P	ice	surface water	Chlorophyll-a

Relinquished:	Date/Time 9/2/21 1150	Received: AAL	Reliquished:	Date/Time	Received:
Relinquished: AAL	Date/Time: 9/2/21 1820	Received:	Relinquished:	Date/Time	Received:

MB

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine and Environmental Affairs
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Harbor Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

NEED RESULTS FOR PERMITTING DEADLINE BY END OF FIRST WEEK IN ~~SEPTEMBER~~ October

WW-212049

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
9/1/21	0815	S-10 Ebb Tide	1	1 Liter Plastic	Dissolved TKN, TOC diss low,TDS	NONE
9/1/21		S-10 Ebb Tide	1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
9/1/21		S-10 Ebb Tide	1	500mL Plastic	NO2, NO3	None
9/1/21		S-10 Ebb Tide	1	Glass	Ortho	NONE
9/1/21		S-10 Ebb Tide	1	Plastic	Bacteria e-coli	Sterile
9/1/21		S-10 Ebb Tide	2	1 Liter Amber Plastic	Chlorophyll-a	NONE
9/1/21	0835	S-7 Ebb Tide	1	1 Liter Plastic	Dissolved TKN, TOC diss low,TDS	NONE
9/1/21		S-7 Ebb Tide	1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
9/1/21		S-7 Ebb Tide	1	500mL Plastic	NO2, NO3	None
9/1/21		S-7 Ebb Tide	1	Glass	Ortho	NONE
9/1/21		S-7 Ebb Tide	1	Plastic	Bacteria e-coli	Sterile
9/1/21		S-7 Ebb Tide	2	1 Liter Amber Plastic	Chlorophyll-a	NONE

WW-212050

5 1530 MF

5

NOTE: **Analysis needed for reporting in lowest detection possible**; O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Kjeldahl Nitrogen, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Bacteria E-coli, Chlorophyll-a

Relinquished By: Date/Time

Kim Tow 9/1/21 1120

Received By: ~~Date/Time:~~

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine and Environmental Affairs
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Harbor Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

NEED RESULTS FOR PERMITTING DEADLINE BY END OF FIRST WEEK IN ~~SEPTEMBER~~ October

ww-212051

ww-212052

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
9/1/21	1005	S-10 2-4 HST	1	1 Liter Plastic	Dissolved TKN, TOC diss low,TDS	NONE
9/1/21		S-10 2-4 HST	1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
9/1/21		S-10 2-4 HST	1	500mL Plastic	NO2, NO3	None
9/1/21		S-10 2-4 HST	1	Glass	Ortho	NONE
9/1/21		S-10 2-4 HST	1	Plastic	Bacteria e-coli	Sterile
9/1/21		S-10 2-4 HST	2	1 Liter Amber Plastic	Chlorophyll-a	NONE
9/1/21	1020	S-7 2-4 HST	1	1 Liter Plastic	Dissolved TKN, TOC diss low,TDS	NONE
9/1/21		S-7 2-4 HST	1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
9/1/21		S-7 2-4 HST	1	500mL Plastic	NO2, NO3	None
9/1/21		S-7 2-4 HST	1	Glass	Ortho	NONE
9/1/21		S-7 2-4 HST	1	Plastic	Bacteria e-coli	Sterile
9/1/21		S-7 2-4 HST	2	1 Liter Amber Plastic	Chlorophyll-a	NONE

45

25

NOTE: **Analysis needed for reporting in lowest detection possible**; O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Kjeldahl Nitrogen, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Bacteria E-coli, Chlorophyll-a

Relinquished By:	Date/Time	Received By:	Date/Time:
Kim Ta	9/1/21 1100		

Chain of Custody

Laboratory:
Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:
Town of Plymouth - Department of Marine and Environmental Affairs
26 Court Street, Plymouth, MA 02360 /508-747-1620 x10198, ktower@plymouth-ma.gov
Project Name: **Harbor Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

NEED RESULTS FOR PERMITTING DEADLINE BY END OF FIRST WEEK IN ~~SEPTEMBER~~ October

WW-212053

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
9/1/21	1030	S-8A 2-4 HST	1	1 Liter Plastic	Dissolved TKN, TOC diss low,TDS	NONE
9/1/21		S-8A 2-4 HST	1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
9/1/21		S-8A 2-4 HST	1	500mL Plastic	NO2, NO3	None
9/1/21		S-8A 2-4 HST	1	Glass	Ortho	NONE
9/1/21		S-8A 2-4 HST	1	Plastic	Bacteria e-coli	Sterile
9/1/21		S-8A 2-4 HST	2	1 Liter Amber Plastic	Chlorophyll-a	NONE
			1	1 Liter Plastic	Dissolved TKN, TOC diss low,TDS	NONE
			1	1 Liter Plastic	TKN, TN, TP, TOC Low	NONE
			1	500mL Plastic	NO2, NO3	None
			1	Glass	Ortho	NONE
			1	Plastic	Bacteria e-coli	Sterile
			2	1 Liter Amber Plastic	Chlorophyll-a	NONE

40

NOTE: **Analysis needed for reporting in lowest detection possible**; O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Kjeldahl Nitrogen, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Bacteria E-coli, Chlorophyll-a

Relinquished By:	Date/Time	Received By:	Date/Time:
Kim Tower	9/1/21 1120		