

Appendix 5

2018 MS4 Stormwater Annual Report

Water Testing Data

Part 2



**ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING**

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East Hartford, CT 06108
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City of New Haven
Engineering Department
200 Orange Street, 5th Floor
New Haven, CT 06510

January 23, 2019
Project No. 07-209118

Attn: Mr. Ian Juden
Project Manager

Re: MS4 Sampling Results (2018)
New Haven, Connecticut

Dear Mr. Juden:

The following information pertains to stormwater samples collected by ATC from designated locations associated with the City of New Haven municipal separate storm sewer system (MS4) in 2018. Please note, the information provided in this letter and subsequent attachments relate to stormwater samples collected in both the 2018 and 2019 fiscal years. Stormwater sampling events were conducted on the following dates:

- June 21, 2018
- June 28, 2018
- November 13, 2018
- December 21, 2018
- December 28, 2018

ATC recorded geochemical data in the field and submitted stormwater samples for laboratory analysis. Field Parameters were collected using a YSI Probe and Turbidity Meter, and include temperature, specific conductivity, pH, dissolved oxygen, oxygen reduction potential, and turbidity. Color, odor, and clarity were also noted. Stormwater samples submitted to the laboratory were analyzed for boron, hardness, chlorine, chemical oxygen demand (COD), MBAS (surfactants), ammonia, nitrite, nitrate, oil and grease, nitrogen tot kjeldahl (TKN), total phosphorous, total suspended solids (TSS), conductivity, salinity, escherichia coli, enterococci bacteria, fecal coliforms, and total coliforms.

All stormwater samples collected by ATC in June 2018 were submitted to Phoenix Environmental Laboratories (Phoenix) of Manchester, Connecticut. Duplicate bacteria stormwater samples collected in November and December 2018 were also submitted for bacteria analysis to Environmental Consulting Laboratories, Inc. of Madison, Connecticut.

During the fiscal year 2019, ATC will continue to sample during qualifying storm events.

If you have any questions or require additional information, please contact the undersigned at (860) 282-9924.

Sincerely,
ATC GROUP SERVICES LLC


Greg Ostrinski
Field Technician I


Luke R. Whitehouse
Project Manager

ATTACHMENTS

SUMMARY TABLES

LABORATORY REPORTS AND CHAINS OF CUSTODY:

-06/21/2018

-06/28/2018

-11/13/2018

-12/21/2018

-12/28/2018

SUMMARY TABLES

STORMWATER LABORATORY ANALYTICAL RESULTS
 JUNE 2018, QUINNIPAC AND MILL RIVER
 NEW HAVEN, CONNECTICUT

Sampling Location	River	Sample Date	Field Parameters			Laboratory Analytical Parameters															
			pH	Turbidity (mg/L)	Bioassay (mg/L)	Mercury (mg/L)	Chloride Residual (mg/L)	COD (mg/L)	MIBALS (mg/L)	Amoniacal Nitrogen (mg/L)	Nitrate-N (mg/L)	Oil and Grease (mg/L)	Total P (mg/L)	TSS (mg/L)	Escherichia coli (MPN/100 ml)	Escherichia coli (MPN/100 ml)	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Conductivity (microhm/cm)	Salinity (ppt)	
0180	Quinnipiac	6/21/18	7.04	6.37	0.05	220	<0.02	<10	<0.05	0.08	2.23	<1.4	0.82	0.123	8.0	616	>24,200	605	>24,200	678	<0.5
CB3140	Quinnipiac	6/21/18	6.85	160.5	0.06	115	<0.02	305	1.15	3.80	1.27	4.4	0.959	76	1,660	>24,200	1,350	>24,200	165	<0.5	
CB3154-D	Quinnipiac	6/21/18	6.58	218.3	<0.05	11.1	<0.02	164	0.99	0.80	0.68	11	2.45	110	1,660	>24,200	>24,200	>24,200	92	<0.5	
CB3145	Quinnipiac	6/21/18	6.97	36.42	<0.05	5.4	<0.02	348	0.56	0.42	0.67	4.8	4.99	26	>24,200	>24,200	>24,200	38	<0.5		
CB3163	Quinnipiac	6/21/18	6.81	181.5	<0.05	94.5	<0.02	276	0.54	2.04	<0.02	3.7	6.17	100	3,870	>24,200	17,300	>24,200	299	<0.5	
CB3111	Quinnipiac	6/21/18	6.89	386.2	<0.05	33.0	<0.02	257	0.49	2.98	0.95	4.9	6.88	340	>24,200	>24,200	19,900	>24,200	169	<0.5	
CB3245	Quinnipiac	6/21/18	6.63	204.5	<0.05	25.3	<0.02	212	0.98	1.06	1.00	5.7	2.77	120	789	>24,200	884	>24,200	506	<0.5	
0119	Mill	6/28/18	6.95	303.0	<0.05	43.2	<0.02	204	0.67	0.42	0.15	2.7	3.32	200	3,450	>24,200	4,110	>24,200	112	<0.5	
CB9268	Mill	6/28/18	7.00	298.0	<0.05	4.5	<0.02	90	0.23	0.18	<0.010	1.6	1.48	280	9,900	>24,200	7,270	>24,200	28	<0.5	
CB8843	Mill	6/28/18	6.55	224.9	<0.05	15.4	<0.02	124	0.11	0.28	0.12	3.5	1.58	140	15,500	>24,200	5,170	>24,200	14	<0.5	
CB8818	Mill	6/28/18	6.89	66.86	<0.05	4.9	<0.02	40	<0.10	0.08	0.09	<1.4	1.16	48	24,300	>24,200	17,300	>24,200	16	<0.5	
CB8810	Mill	6/28/18	6.65	45.26	<0.05	4.4	0.03	25	<0.10	0.20	0.14	<1.4	0.91	30	15,500	>24,200	11,200	>24,200	16	<0.5	
CB8803	Mill	6/28/18	6.71	43.79	<0.05	3.0	<0.02	38	0.11	0.09	0.14	1.5	0.60	24	36,500	>24,200	19,900	>24,200	20	<0.5	
CB8804	Mill	6/28/18	6.80	48.50	<0.05	2.7	<0.02	31	0.11	0.46	0.23	<1.4	1.45	39	2,910	>24,200	1,350	>24,200	25	<0.5	

Notes:
 Turbidity and pH field tested by ATC
 Concentrations in bold were reported above the laboratory reporting limits
 mg/L: milligrams per liter
 TKN = Nitrogen Tot Kjeldahl
 <0.5: indicates compound was Not Detected at or above the specified laboratory reporting limit
 >24,200: indicates sample was found above the laboratory detection limit

TABLE 2
STORMWATER LABORATORY ANALYTICAL RESULTS

Yonkers
November 2018
New Haven, Connecticut

Location ID	Sample Date	Field Parameters										Laboratory Analytical Parameters													
		Temp	Conductivity	pH	DO	ORP	Turbidity	Color	Brom	Hardness	Chloride	COD	MnAs	Ammonia as Nitrogen	Nitrite-N	Nitrate-N	Oil and Grease	TKN	Total P	TSS	E. Coli (MPN/100 ml)	Enterococci Bacteria (MPN/100ml)	Fecal Coliforms (MPN/100ml)	Total Coliforms (MPN/100ml)	Comorbidity (non-harmful)
O11	11/13/18	10.2	195.8	6.37	9.91	294.5	8.49	Tan	<0.05	43.2	19	0.09	0.17	<0.010	0.49	<1.4	0.48	0.076	7.0	609	602	383	17,300	186	<0.5
CB157	11/13/18	7.4	40.9	5.9	11.66	358.5	131.5	Brown	<0.05	17.5	139	0.67	<0.10	<0.010	<0.02	<1.4	0.79	0.452	17	243	862	134	>24,200	37	<0.5
CB166A	11/13/18	8	82.3	5.28	7.67	337.1	57.24	Tan/Brown	<0.05	14.2	294	0.66	0.31	<0.010	<0.02	<1.4	3.11	1.210	39	146	24,200	388	>24,200	84	<0.5
CB172	11/13/18	7.3	34.1	5.39	12.3	340.6	31.31	Brown	<0.05	13.2	127	0.45	<0.10	<0.010	<0.02	<1.4	0.72	0.49	66	439	650	148	>24,200	34	<0.5
CB214	11/13/18	8.3	55.8	5.18	12.1	347.8	17.86	Tan	<0.05	12.7	199	0.09	0.21	<0.010	<0.02	<1.4	1.99	1.910	68	161	>24,200	231	>24,200	61	<0.5
CB689	11/13/18	7.3	12.1	5.58	13.58	323	9.18	Clear	<0.05	1.3	<10	<0.05	<0.05	<0.010	0.05	<1.4	0.13	0.115	25	41	201	31	17,300	11	<0.05
CB771	11/13/18	7.9	138.6	5.8	9.09	368.6	55.66	Brown / Yellow	<0.05	42.9	298	0.16	0.36	0.012	<0.02	<1.4	3.12	0.890	140	>24,200	>24,200	>24,200	>24,200	139	<0.5

Notes:

Concentrations in **bold** were reported above the laboratory reporting limits
 mg/l = milligrams per liter
 TKN = Nitrogen Tot Kjeldahl
 <0.5: indicates compound was Not Detected at or above the specified laboratory reporting limit
 NA: sample was Not Analyzed for this parameter
 CTDEEP: Connecticut Department of Energy and Environmental Protection
 >24,200: Indicates sample was found above laboratory detection limits

STORMWATER LABORATORY ANALYTICAL RESULTS

Individual Outfalls No. 1068 and 1069 and December 2018
Newtown, Connecticut

Location ID	Sample Date	Field Parameters										Laboratory Analytical Parameters										Total Coliforms (CFU/100ml)	Fecal Coliforms (CFU/100ml)	Salinity (ppt)		
		Temp	Conductivity	pH	DO	Turbidity	Color	Biom	Mercury (ppb)	Chloride (mg/L)	Fluoride (mg/L)	Ammonia (mg/L)	Nitrogen (mg/L)	Phosphorus (mg/L)	TKN (mg/L)	TKN (mg/L)	TKN (mg/L)	TKN (mg/L)	TKN (mg/L)	TKN (mg/L)	TKN (mg/L)				TKN (mg/L)	TKN (mg/L)
07	11/13/18	16	544.3	6.57	6.22	222.2	30.99	Brown-Tan	0.05	191	<0.02	152	0.16	5.14	0.07	1.02	6.7	13.6	1.340	82	>24,200	>24,200	>24,200	505	<0.5	
010	12/28/18	12.2	653.1	6.97	5.32	139.4	37.86	Brown, cloudy	<0.05	102	<0.02	167	0.2	3.64	0.077	2.20	6.0	14.4	1.760	73	>24,200	>24,200	>24,200	678	<0.5	
012	11/13/18	9.8	107	6.41	11.07	331.1	14.12	Tan	<0.05	26.3	<0.02	23	<0.1	<0.05	<0.010	0.18	<1.4	0.26	0.129	6.0	5.480	5.170	1.860	106	<0.5	
013	12/28/18	11.5	631.7	6.96	6.14	144.6	25.64	Brown, cloudy	<0.05	117	<0.02	420	0.3	4.60	0.132	1.56	11	15.8	2.020	120	>24,200	>24,200	>24,200	276	<0.5	
014	11/13/18	9.5	121.3	6.33	11.08	350.5	16.82	Clear-Tan	<0.05	41.4	<0.02	42	0.07	<0.05	<0.010	0.48	<1.4	0.44	0.278	19	3.450	2.200	588	>24,200	118	<0.5
041	12/28/18	8.2	274.1	7.13	9.45	198.7	29.78	Tan	<0.05	52.8	<0.02	97	0.75	3.42	0.032	0.86	5.6	10.6	1.330	51	>24,200	>24,200	>24,200	276	<0.5	
046	12/21/18	9.5	30.7	8.67	11.94	197.5	21.42	Clear	<0.05	4.9	<0.02	29	<0.05	0.06	<0.010	0.04	<1.4	0.38	0.130	36	637	2.200	197	9,800	14	<0.5
047	12/21/18	8.4	413.3	9.09	9.86	117.6	34.57	Clear	<0.05	8.8	<0.02	37	1.11	0.10	<0.010	0.05	2.7	0.67	0.161	57	9,140	3.870	5,170	10,100	15	<0.5
057	12/28/18	17.6	519.1	7.76	3.6	168.5	63.38	Brown-green	0.07	124	<0.02	407	1.1	13.10	0.022	0.76	100	31.4	4.09	120	>24,200	>24,200	>24,200	488	<0.5	
058	12/28/18	11.9	493.4	7.25	12.12	197.8	42.98	Brown-green	0.06	98.6	<0.02	205	1.23	11.50	0.191	1.32	21	24.5	2.960	91	>24,200	>24,200	>24,200	515	<0.5	
066	11/13/18	8.8	26.2	6.06	12.06	339.3	16.3	Clear	<0.05	6.0	0.02	38	<0.05	0.15	<0.010	0.08	<1.4	0.41	0.182	12	3,080	2,190	1,480	>24,200	24	<0.5
068	12/28/18	5.3	118.4	8.12	12.72	159.1	34.26	Brown	<0.05	6.5	<0.02	27	0.12	0.40	0.020	0.23	2.1	0.70	0.069	49	30	249	20	13,000	120	<0.5
087	12/28/18	13.4	524.4	7.5	3.33	168.1	42.64	Brown, cloudy	0.08	115	<0.02	190	6.29	10.8	0.215	2.05	18	22.1	2.18	110	>24,200	>24,200	>24,200	528	<0.5	
088	12/28/18	7.5	61.5	7.72	9.98	165.6	19.87	Brown, cloudy	<0.05	7.3	<0.02	27	0.14	0.22	0.016	0.21	1.8	0.60	0.105	12	591	471	637	>24,200	51	<0.5
089	12/21/18	10.7	42.8	7.95	11.13	251.0	34.45	Clear	<0.05	11.6	<0.02	35	0.11	0.14	<0.010	0.09	6.3	0.64	0.133	30	7,700	5,480	2,610	>24,200	39	<0.5
0121	12/21/18	10.6	51.3	7.63	11.22	282.4	14.01	Slightly-Tan	<0.05	12.4	<0.02	16	3.46	0.10	<0.010	0.33	6.5	0.39	0.113	7.0	708	1,620	286	17,300	49	<0.5
0132	12/21/18	12.1	545.3	7.26	9.02	271.9	11.21	Clear	<0.05	8	<0.02	14	0.4	0.23	<0.010	0.21	1.5	0.64	0.061	<5.0	12,000	2,190	1,260	18,900	300	<0.5
0138	12/21/18	10.3	49.6	7.65	10.39	293.1	13.45	Tan	<0.05	11.8	0.03	31	0.15	0.14	<0.010	0.12	7.4	1.07	0.135	16	171	554	158	>24,200	48	<0.5

Notes:
Concentrations in bold were reported above the laboratory reporting limits
mg/L - milligrams per liter
TKN - Nitrogen Tot Kjeldahl
< 0.5, indicates compound was Not Detected as or above the specified laboratory reporting limit
>24,200, indicates sample was found above laboratory detection limits
Blank cells indicate outfalls that have not yet been sampled

TABLE 4
STORMWATER LABORATORY ANALYTICAL RESULTS

Laboratory Duplicate Bacteria Samples
New Haven, Connecticut

Location ID	Sample Date	Phoenix Environmental Labs				Environmental Consulting Laboratories			
		Escherichia Coli (MPN/100 mb)	Enterococci Bacteria (MPN/100mb)	Fecal Coliforms (MPN/100mb)	Total Coliforms (MPN/100mb)	Escherichia Coli (MPN/100 mb)	Enterococci Bacteria (MPN/100mb)	Fecal Coliforms (MPN/100mb)	Total Coliforms (MPN/100mb)
O11	11/13/18	609	602	383	17,300	200	310	300	17,250
CB157	11/13/18	243	862	134	>24,200	200	630	<100	173,290
CB166A	11/13/18	146	24,200	388	>24,200	<100	12,220	100	>241,960
CB172	11/13/18	439	650	148	>24,200	1,030	850	100	241,960
CB214	11/13/18	161	>24,200	231	>24,200	410	28,120	630	>241,960
CB689	11/13/18	41	201	31	17,300	200	<100	<100	25,950
CB771	11/13/18	>24,200	>24,200	>24,200	>24,200	>241,960	92,080	173,290	>241,960
O7	11/13/18	>24,200	>24,200	>24,200	>24,200	241,960	>241,960	48,840	>241,960
O10	12/28/18	>24,200	>24,200	>24,200	>24,200	>241,960	>241,960	>241,960	>241,960
O12	11/13/18	5,480	5,170	1,860	>24,200	5,040	6,770	1,560	198,630
O13	12/28/18	>24,200	>24,200	>24,200	>24,200	>241,960	61,310	155,310	>241,960
O14	11/13/18	3,450	2,280	588	>24,200	6,310	1,870	630	86,640
O41	12/28/18	>24,200	>24,200	>24,200	>24,200	>241,960	92,080	>241,960	>241,960
O46	12/21/18	637	2,280	197	9,800	410	1,990	200	8,420
O47	12/21/18	9,140	3,870	5,170	10,100	3,360	1,580	1,610	13,540
O57	12/28/18	>24,200	>24,200	>24,200	>24,200	>241,960	>241,960	>241,960	>241,960
O58	12/28/18	>24,200	>24,200	>24,200	>24,200	>241,960	81,640	>241,960	>241,960
O66	11/13/18	3,080	2,190	1,480	>24,200	2,350	1,350	1,610	61,310
O68	12/28/18	30	249	20	13,000	100	8,600	100	5,810
O81									
O87	12/28/18	>24,200	6,910	>24,200	>24,200	>241,960	>241,960	>241,960	>241,960
O88	12/28/18	591	471	637	>24,200	520	1,100	200	30,760
O89	12/21/18	7,700	5,480	2,610	>24,200	9,590	5,540	2,980	46,110
O121	12/21/18	708	1,620	288	17,300	520	1,580	310	11,450
O122									
O124									
O124X									
O125									
O126									
O127									
O128									
O129									
O132	12/21/18	12,000	2,190	1,260	19,900	7,940	630	1,100	18,600
O133									
O134									
O138	12/21/18	171	554	158	>24,200	100	1,630	100	77,010

Notes:
 Concentrations in **bold** were reported above the laboratory reporting limits
 mg/l: milligrams per liter
 TKN = Nitrogen Tot Kjeldahl
 < 0.5: indicates compound was Not Detected at or above the specified laboratory reporting limit
 >24,200: Indicates sample was found above laboratory detection limits
 Blank cells indicate outfalls that have not yet been sampled

LABORATORY REPORT AND CHAIN OF CUSTODY

06/21/2018



Monday, July 02, 2018

Mr. Luke Whitehouse
ATC Group Services, LLC
33 Business Park Dr.
Branford, CT 06405

Project ID: 209118
Sample ID#s: CA75265 - CA75271

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

A handwritten signature in cursive script that reads "Phyllis Shiller".

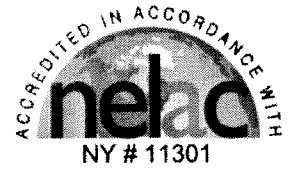
Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



SDG Comments

July 02, 2018

SDG I.D.: GCA75265

Metals Analysis:

The client requested a site specific list of elements which is shorter than the RCP list.

Non RCP analyses are included with this report. The RCP narrative is provided at the request of the client.

Temperature above 6C:

The samples were received in a cooler with ice packs. The samples were delivered to the Laboratory within a short period of time after sample collection. Therefore no significant bias is suspected.



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report
 July 02, 2018

FOR: Mr. Luke Whitehouse
 ATC Group Services, LLC
 33 Business Park Dr.
 Branford, CT 06405

Sample Information

Matrix: STORM WATER
 Location Code: ATC-BRAN
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: CP
 Analyzed by: see "By" below

Date Time
 06/21/18 1:40
 06/21/18 7:26

Laboratory Data

SDG ID: GCA75265
 Phoenix ID: CA75265

Project ID: 209118
 Client ID: 0180

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Boron	0.05	0.05	mg/L	1	06/28/18	EK	SW6010C
Hardness (CaCO3)	220	0.1	mg/L	1	06/29/18		E200.7
Escherichia Coli	616	10	MPN/100 mls	10	06/21/18 08:15	KDB/KDB	SM9223B-04
Enterococci Bacteria	>24200	10	MPN/100 mls	10	06/21/18 08:35	KDB/KDB	Enterolert
Fecal Coliforms MPN	605	10	MPN/100 mls	1	06/21/18 09:00	KDB/KDB	Colilert-18
Total Coliforms	>24200	10	MPN/100 mls	10	06/21/18 08:15	KDB/KDB	SM9223B-06
Chlorine Residual	< 0.02	0.02	mg/L	1	06/21/18 20:48	O	SM4500Cl-G-00
C.O.D.	< 10	10	mg/L	1	06/22/18	KMH/MSF	SM5220D-11
Conductivity	678	5.00	umhos/cm	1	06/22/18	RWR/KDB	SM2510B-11
MBAS	< 0.05	0.05	mg/L	1	06/21/18 23:55	XS	SM5540 C-11
Ammonia as Nitrogen	0.08	0.05	mg/L	1	06/22/18	WHM	E350.1
Nitrite-N	0.033	0.010	mg/L	1	06/21/18 17:05	MC	E353.2
Nitrate-N	2.23	0.10	mg/L	5	06/21/18 17:06	MC	E353.2
Oil and Grease by EPA 1664A	< 1.4	1.4	mg/L	1	06/22/18	MSF	E1664A
Salinity	< 0.5	0.5	ppt	1	06/21/18	RWR	SM2520B-10
Nitrogen Tot Kjeldahl	0.82	0.10	mg/L	1	06/22/18	WHM	E351.1
Phosphorus, as P	0.123	0.010	mg/L	1	06/21/18	MI	SM4500PE-11
Total Suspended Solids	8.0	5.0	mg/L	1	06/22/18	DA/KH	SM2540D-11
Total Metals Digestion	Completed				06/27/18	AG	

Project ID: 209118
Client ID: 0180

Phoenix I.D.: CA75265

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

The regulatory hold time for Chlorine is immediately. This Chlorine was performed in the laboratory and may be considered outside of hold-time.

The LAS standard used for the MBAS analysis has a molecular weight of 342 g/mol.

If there are any questions regarding this data, please call Phoenix Client Services.

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Phyllis Shiller, Laboratory Director

July 02, 2018

Reviewed and Released by: Maryam Taylor, Project Manager



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report
 July 02, 2018

FOR: Mr. Luke Whitehouse
 ATC Group Services, LLC
 33 Business Park Dr.
 Branford, CT 06405

Sample Information

Matrix: STORM WATER
 Location Code: ATC-BRAN
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: CP
 Analyzed by: see "By" below

Date

06/21/18
 06/21/18

Time

1:55
 7:26

Laboratory Data

SDG ID: GCA75265
 Phoenix ID: CA75266

Project ID: 209118
 Client ID: 3140

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Boron	0.06	0.05	mg/L	1	06/28/18	EK	SW6010C
Hardness (CaCO3)	115	0.1	mg/L	1	06/28/18		E200.7
Escherichia Coli	6870	10	MPN/100 mls	10	06/21/18 08:15	KDB/KDB	SM9223B-04
Enterococci Bacteria	6870	10	MPN/100 mls	10	06/21/18 08:35	KDB/KDB	Enterolert
Fecal Coliforms MPN	1350	10	MPN/100 mls	1	06/21/18 09:00	KDB/KDB	Colilert-18
Total Coliforms	>24200	10	MPN/100 mls	10	06/21/18 08:15	KDB/KDB	SW9223B-06
Chlorine Residual	< 0.02	0.02	mg/L	1	06/21/18 20:48	O	SM4500CI-G-00
C.O.D.	305	10	mg/L	1	06/22/18	KMH/MSF	SM5220D-11
Conductivity	165	5.00	umhos/cm	1	06/22/18	RWR/KDB	SM2510B-11
MBAS	1.15	0.10	mg/L	2	06/21/18 23:56	XS	SM5540 C-11
Ammonia as Nitrogen	3.80	0.25	mg/L	5	06/22/18	WHM	E350.1
Nitrite-N	0.044	0.010	mg/L	1	06/21/18 17:07	MC	E353.2
Nitrate-N	1.27	0.02	mg/L	1	06/21/18 17:07	MC	E353.2
Oil and Grease by EPA 1664A	4.4	1.4	mg/L	1	06/22/18	MSF	E1664A
Salinity	< 0.5	0.5	ppt	1	06/21/18	RWR	SM2520B-10
Nitrogen Tot Kjeldahl	8.17	0.50	mg/L	5	06/22/18	WHM	E351.1
Phosphorus, as P	0.959	0.050	mg/L	5	06/21/18	MI	SM4500PE-11
Total Suspended Solids	76	5.0	mg/L	1	06/22/18	DA/KH	SM2540D-11
Total Metals Digestion	Completed				06/27/18	AG	

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

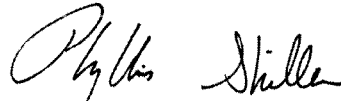
Comments:

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The LAS standard used for the MBAS analysis has a molecular weight of 342 g/mol.

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Phyllis Shiller, Laboratory Director

July 02, 2018

Reviewed and Released by: Maryam Taylor, Project Manager



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

July 02, 2018

FOR: Mr. Luke Whitehouse
 ATC Group Services, LLC
 33 Business Park Dr.
 Branford, CT 06405

Sample Information

Matrix: STORM WATER
 Location Code: ATC-BRAN
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: CP
 Analyzed by: see "By" below

Date Time
 06/21/18 3:30
 06/21/18 7:26

Laboratory Data

SDG ID: GCA75265
 Phoenix ID: CA75267

Project ID: 209118
 Client ID: 3154D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Boron	< 0.05	0.05	mg/L	1	06/28/18	EK	SW6010C
Hardness (CaCO3)	11.1	0.1	mg/L	1	06/28/18		E200.7
Escherichia Coli	1360	10	MPN/100 mls	10	06/21/18 08:15	KDB/KDB	SM9223B-04
Enterococci Bacteria	>24200	10	MPN/100 mls	10	06/21/18 08:35	KDB/KDB	Enterolert
Fecal Coliforms MPN	>24200	10	MPN/100 mls	1	06/21/18 09:00	KDB/KDB	Colilert-18
Total Coliforms	>24200	10	MPN/100 mls	10	06/21/18 08:15	KDB/KDB	SW9223B-06
Chlorine Residual	< 0.02	0.02	mg/L	1	06/21/18 20:51	O	SM4500CI-G-00
C.O.D.	164	10	mg/L	1	06/22/18	KMH/MSF	SM5220D-11
Conductivity	92	5.00	umhos/cm	1	06/22/18	RWR/KDB	SM2510B-11
MBAS	0.89	0.10	mg/L	2	06/21/18 23:56	XS	SM5540 C-11
Ammonia as Nitrogen	0.80	0.25	mg/L	5	06/22/18	WHM	E350.1
Nitrite-N	0.054	0.010	mg/L	1	06/21/18 17:08	MC	E353.2
Nitrate-N	0.68	0.02	mg/L	1	06/21/18 17:08	MC	E353.2
Oil and Grease by EPA 1664A	11	1.4	mg/L	1	06/22/18	MSF	E1664A
Salinity	< 0.5	0.5	ppt	1	06/21/18	RWR	SM2520B-10
Nitrogen Tot Kjeldahl	2.65	0.50	mg/L	5	06/22/18	WHM	E351.1
Phosphorus, as P	0.460	0.010	mg/L	1	06/21/18	MI	SM4500PE-11
Total Suspended Solids	110	10	mg/L	2	06/22/18	DA/KH	SM2540D-11
Total Metals Digestion	Completed				06/27/18	AG	

Project ID: 209118
Client ID: 3154D

Phoenix I.D.: CA75267

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director

July 02, 2018

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 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

July 02, 2018

FOR: Mr. Luke Whitehouse
 ATC Group Services, LLC
 33 Business Park Dr.
 Branford, CT 06405

Sample Information

Matrix: STORM WATER
 Location Code: ATC-BRAN
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: CP
 Analyzed by: see "By" below

Date

06/21/18
 06/21/18

Time

2:30
 7:26

Laboratory Data

SDG ID: GCA75265
 Phoenix ID: CA75268

Project ID: 209118
 Client ID: 3145

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Boron	< 0.05	0.05	mg/L	1	06/28/18	EK	SW6010C
Hardness (CaCO3)	5.4	0.1	mg/L	1	06/28/18		E200.7
Escherichia Coli	>24200	10	MPN/100 mls	10	06/21/18 08:15	KDB/KDB	SM9223B-06
Enterococci Bacteria	>24200	10	MPN/100 mls	10	06/21/18 08:35	KDB/KDB	Enterolert
Fecal Coliforms MPN	>24200	10	MPN/100 mls	1	06/21/18 09:00	KDB/KDB	Colilert-18
Total Coliforms	>24200	10	MPN/100 mls	10	06/21/18 08:15	KDB/KDB	SW9223B-06
Chlorine Residual	< 0.02	0.02	mg/L	1	06/21/18 20:51	O	SM4500CI-G-00
C.O.D.	368	10	mg/L	1	06/22/18	KMH/MSF	SM5220D-11
Conductivity	38	5.00	umhos/cm	1	06/22/18	RWR/KDB	SM2510B-11
MBAS	0.56	0.10	mg/L	2	06/21/18 23:57	XS	SM5540 C-11
Ammonia as Nitrogen	0.42	0.25	mg/L	5	06/22/18	WHM	E350.1
Nitrite-N	0.033	0.010	mg/L	1	06/21/18 17:09	MC	E353.2
Nitrate-N	0.67	0.02	mg/L	1	06/21/18 17:09	MC	E353.2
Oil and Grease by EPA 1664A	4.8	1.4	mg/L	1	06/22/18	MSF	E1664A
Salinity	< 0.5	0.5	ppt	1	06/21/18	RWR	SM2520B-10
Nitrogen Tot Kjeldahl	4.99	0.50	mg/L	5	06/22/18	WHM	E351.1
Phosphorus, as P	1.25	0.050	mg/L	5	06/21/18	MI	SM4500PE-11
Total Suspended Solids	26	10	mg/L	2	06/22/18	DA/KH	SM2540D-11
Total Metals Digestion	Completed				06/27/18	AG	

Project ID: 209118
Client ID: 3145

Phoenix I.D.: CA75268

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

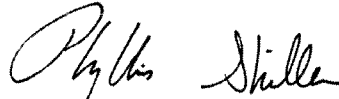
Comments:

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Phyllis Shiller, Laboratory Director

July 02, 2018

Reviewed and Released by: Maryam Taylor, Project Manager



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

July 02, 2018

FOR: Mr. Luke Whitehouse
 ATC Group Services, LLC
 33 Business Park Dr.
 Branford, CT 06405

Sample Information

Matrix: STORM WATER
 Location Code: ATC-BRAN
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: CP
 Analyzed by: see "By" below

Date

06/21/18
 06/21/18

Time

3:45
 7:26

Laboratory Data

SDG ID: GCA75265
 Phoenix ID: CA75269

Project ID: 209118
 Client ID: 3163

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Boron	< 0.05	0.05	mg/L	1	06/28/18	EK	SW6010C
Hardness (CaCO3)	94.5	0.1	mg/L	1	06/28/18		E200.7
Escherichia Coli	3570	10	MPN/100 mls	10	06/21/18 08:15	KDB/KDB	SM9223B-04
Enterococci Bacteria	2480	10	MPN/100 mls	10	06/21/18 08:35	KDB/KDB	Enterolert
Fecal Coliforms MPN	17300	10	MPN/100 mls	1	06/21/18 09:00	KDB/KDB	Colilert-18
Total Coliforms	>24200	10	MPN/100 mls	10	06/21/18 08:15	KDB/KDB	SW9223B-06
Chlorine Residual	< 0.02	0.02	mg/L	1	06/21/18 20:52	O	SM4500Cl-G-00
C.O.D.	276	10	mg/L	1	06/22/18	KMH/MSF	SM5220D-11
Conductivity	299	5.00	umhos/cm	1	06/22/18	RWR/KDB	SM2510B-11
MBAS	0.54	0.10	mg/L	2	06/22/18 22:14	X	SM5540 C-11
Ammonia as Nitrogen	2.04	0.25	mg/L	5	06/22/18	WHM	E350.1
Nitrite-N	0.168	0.010	mg/L	1	06/21/18 17:10	MC	E353.2
Nitrate-N	< 0.02	0.02	mg/L	1	06/21/18 17:10	MC	E353.2
Oil and Grease by EPA 1664A	3.7	1.4	mg/L	1	06/22/18	MSF	E1664A
Salinity	< 0.5	0.5	ppt	1	06/21/18	RWR	SM2520B-10
Nitrogen Tot Kjeldahl	6.17	0.50	mg/L	5	06/22/18	WHM	E351.1
Phosphorus, as P	1.94	0.050	mg/L	5	06/21/18	MI	SM4500PE-11
Total Suspended Solids	100	10	mg/L	2	06/22/18	DA/KH	SM2540D-11
Total Metals Digestion	Completed				06/27/18	AG	

Project ID: 209118
Client ID: 3163

Phoenix I.D.: CA75269

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

The regulatory hold time for Chlorine is immediately. This Chlorine was performed in the laboratory and may be considered outside of hold-time.

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Phyllis Shiller, Laboratory Director

July 02, 2018

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 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

July 02, 2018

FOR: Mr. Luke Whitehouse
 ATC Group Services, LLC
 33 Business Park Dr.
 Branford, CT 06405

Sample Information

Matrix: STORM WATER
 Location Code: ATC-BRAN
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: CP
 Analyzed by: see "By" below

Date

06/21/18
 06/21/18

Time

3:55
 7:26

Laboratory Data

SDG ID: GCA75265
 Phoenix ID: CA75270

Project ID: 209118
 Client ID: 3111

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Boron	< 0.05	0.05	mg/L	1	06/28/18	MA	SW6010C
Hardness (CaCO3)	33.0	0.1	mg/L	1	06/29/18		E200.7
Escherichia Coli	>24200	10	MPN/100 mls	10	06/21/18 06:15	KDB/KDB	SM9223B-04
Enterococci Bacteria	>24200	10	MPN/100 mls	10	06/21/18 08:35	KDB/KDB	Enterolert
Fecal Coliforms MPN	19900	10	MPN/100 mls	1	06/21/18 09:00	KDB/KDB	Colilert-18
Total Coliforms	>24200	10	MPN/100 mls	10	06/21/18 08:15	KDB/KDB	SW9223B-06
Chlorine Residual	< 0.02	0.02	mg/L	1	06/21/18 20:53	O	SM4500CI-G-00
C.O.D.	257	10	mg/L	1	06/22/18	KMH/MSF	SM5220D-11
Conductivity	169	5.00	umhos/cm	1	06/22/18	RWR/KDB	SM2510B-11
MBAS	0.49	0.10	mg/L	2	06/22/18 22:14	X	SM5540 C-11
Ammonia as Nitrogen	2.98	0.25	mg/L	5	06/25/18	WHM	E350.1
Nitrite-N	0.492	0.020	mg/L	2	06/21/18 17:11	MC	E353.2
Nitrate-N	0.05	0.04	mg/L	2	06/21/18 17:11	MC	E353.2
Oil and Grease by EPA 1664A	4.9	1.4	mg/L	1	06/22/18	MSF	E1664A
Salinity	< 0.5	0.5	ppt	1	06/21/18	RWR	SM2520B-10
Nitrogen Tot Kjeldahl	6.88	0.50	mg/L	5	06/25/18	WHM	E351.1
Phosphorus, as P	1.51	0.050	mg/L	5	06/21/18	MI	SM4500PE-11
Total Suspended Solids	340	10	mg/L	2	06/22/18	DA/KH	SM2540D-11
Total Metals Digestion	Completed				06/27/18	AG	

Project ID: 209118
Client ID: 3111

Phoenix I.D.: CA75270

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

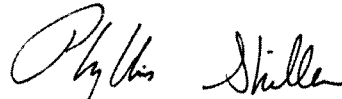
Comments:

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Phyllis Shiller, Laboratory Director

July 02, 2018

Reviewed and Released by: Maryam Taylor, Project Manager



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 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

July 02, 2018

FOR: Mr. Luke Whitehouse
 ATC Group Services, LLC
 33 Business Park Dr.
 Branford, CT 06405

Sample Information

Matrix: STORM WATER
 Location Code: ATC-BRAN
 Rush Request: Standard
 P.O.#:

Custody Information

Collected by:
 Received by: CP
 Analyzed by: see "By" below

Date

06/21/18
 06/21/18

Time

1:45
 7:26

Laboratory Data

SDG ID: GCA75265
 Phoenix ID: CA75271

Project ID: 209118
 Client ID: 3245

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Boron	< 0.05	0.05	mg/L	1	06/28/18	MA	SW6010C
Hardness (CaCO3)	25.3	0.1	mg/L	1	06/29/18		E200.7
Escherichia Coli	789	10	MPN/100 mls	10	06/21/18 08:15	KDB/KDB	SM9223B-04
Enterococci Bacteria	2360	10	MPN/100 mls	10	06/21/18 08:35	KDB/KDB	Enterolert
Fecal Coliforms MPN	884	10	MPN/100 mls	1	06/21/18 09:00	KDB/KDB	Colilert-18
Total Coliforms	>24200	10	MPN/100 mls	10	06/21/18 08:15	KDB/KDB	SW9223B-06
Chlorine Residual	< 0.02	0.02	mg/L	1	06/21/18 20:55	O	SM4500CI-G-00
C.O.D.	212	10	mg/L	1	06/22/18	KMH/MSF	SM5220D-11
Conductivity	506	5.00	umhos/cm	1	06/22/18	RWR/KDB	SM2510B-11
MBAS	0.98	0.10	mg/L	2	06/22/18 22:15	X	SM5540 C-11
Ammonia as Nitrogen	1.06	0.25	mg/L	5	06/25/18	WHM	E350.1
Nitrite-N	0.056	0.010	mg/L	1	06/21/18 17:23	MC	E353.2
Nitrate-N	1.00	0.02	mg/L	1	06/21/18 17:23	MC	E353.2
Oil and Grease by EPA 1664A	5.7	1.4	mg/L	1	06/22/18	MSF	E1664A
Salinity	< 0.5	0.5	ppt	1	06/21/18	RWR	SM2520B-10
Nitrogen Tot Kjeldahl	2.77	0.50	mg/L	5	06/25/18	WHM	E351.1
Phosphorus, as P	0.471	0.010	mg/L	1	06/21/18	MI	SM4500PE-11
Total Suspended Solids	120	5.0	mg/L	1	06/22/18	DA/KH	SM2540D-11
Total Metals Digestion	Completed				06/27/18	AG	

Project ID: 209118
Client ID: 3245

Phoenix I.D.: CA75271

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

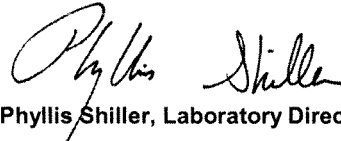
Comments:

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July 02, 2018

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 Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

July 02, 2018

QA/QC Data

SDG I.D.: GCA75265

Parameter	Blk Blank	Sample RL	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 436430 (mg/L), QC Sample No: CA75265 (CA75265, CA75266, CA75267, CA75268, CA75269, CA75270, CA75271)												
<u>ICP Metals - Aqueous</u>												
Boron	BRL	0.05	0.05	0.05	NC	99.8		105			75 - 125	20



Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

July 02, 2018

QA/QC Data

SDG I.D.: GCA75265

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCS D %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 435827 (mg/L), QC Sample No: CA73421 (CA75265, CA75266, CA75267)													
C.O.D.	BRL	10	25	25	NC	100			101			85 - 115	20
Comment: Additional criteria matrix spike acceptance range is 75-125%.													
QA/QC Batch 435619 (mg/L), QC Sample No: CA74673 (CA75265, CA75266, CA75267, CA75268, CA75269)													
Ammonia as Nitrogen	BRL	0.05	24.4	25.6	4.80	97.9			98.5			90 - 110	20
Nitrogen Tot Kjeldahl	BRL	0.10	34.8	35.9	3.10	98.8			97.5			85 - 115	20
Comment: TKN is reported as Organic Nitrogen in the Blank, LCS, DUP and MS.													
QA/QC Batch 435590 (mg/L), QC Sample No: CA74682 (CA75265, CA75266, CA75267, CA75268, CA75269, CA75270, CA75271)													
Phosphorus, as P	BRL	0.01	3.54	3.62	2.20	102			101			85 - 115	20
Comment: Additional criteria matrix spike acceptance range is 75-125%.													
QA/QC Batch 435650 (mg/L), QC Sample No: CA74718 (CA75265, CA75266, CA75267, CA75268, CA75269, CA75270)													
Nitrate-N	BRL	0.02	0.21	0.22	4.70	105			103			90 - 110	20
Nitrite-N	BRL	0.01	<0.010	<0.01	NC	105			106			90 - 110	20
QA/QC Batch 435936 (mg/L), QC Sample No: CA74915 (CA75270, CA75271)													
Ammonia as Nitrogen	BRL	0.05	0.27	0.25	7.70	106			101			90 - 110	20
Nitrogen Tot Kjeldahl	BRL	0.10	1.56	1.52	2.60	104			105			85 - 115	20
Comment: TKN is reported as Organic Nitrogen in the Blank, LCS, DUP and MS.													
QA/QC Batch 435703 (mg/L), QC Sample No: CA75080 (CA75265, CA75271)													
Total Suspended Solids	BRL	5.0	8.0	8.0	NC	92.0						85 - 115	20
QA/QC Batch 435685 (mg/L), QC Sample No: CA75265 (CA75265, CA75266, CA75267, CA75268, CA75269, CA75270, CA75271)													
Chlorine Residual	BRL	0.02	<0.02	<0.02	NC	89.0							
QA/QC Batch 435684 (mg/L), QC Sample No: CA75265 (CA75265, CA75266, CA75267, CA75268)													
MBAS	BRL	0.05	<0.05	0.07	NC	106			115			85 - 115	20
Comment: Additional criteria matrix spike acceptance range is 75-125%.													
QA/QC Batch 435850 (mg/L), QC Sample No: CA75270 (CA75269, CA75270, CA75271)													
MBAS	BRL	0.05	0.49	0.58	16.8	104			104			85 - 115	20
Comment: Additional criteria matrix spike acceptance range is 75-125%.													
QA/QC Batch 435828 (mg/L), QC Sample No: CA75321 (CA75268, CA75269, CA75270, CA75271)													
C.O.D.	BRL	10	35	35	NC	102			106			85 - 115	20
Comment: Additional criteria matrix spike acceptance range is 75-125%.													
QA/QC Batch 435698 (mg/L), QC Sample No: CA75362 (CA75265, CA75266, CA75267, CA75268, CA75269, CA75270, CA75271)													
Oil and Grease by EPA 1664A	BRL	1.4	<1.4	<1.4	NC	96.0			95.0			85 - 115	20


QA/QC Data

SDG I.D.: GCA75265

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Comment:													
Additional: MS acceptance range 75-125%.													
QA/QC Batch 435707 (mg/L), QC Sample No: CA75385 (CA75266, CA75267, CA75268, CA75269, CA75270)													
Total Suspended Solids	BRL	5.0	<5.0	<5.0	NC	95.0						85 - 115	20
QA/QC Batch 435652 (mg/L), QC Sample No: CA75428 (CA75271)													
Nitrate-N	BRL	0.02	0.03	0.03	NC	105			104			90 - 110	20
Nitrite as Nitrogen	BRL	0.01	0.04	<0.01	NC	105			100			90 - 110	20
QA/QC Batch 435761 (umhos/cm), QC Sample No: CA76175 (CA75265, CA75266, CA75267, CA75268, CA75269, CA75270, CA75271)													
Conductivity	BRL	5.00	373	382	2.40	92.1						85 - 115	20
Comment:													
Additional criteria matrix spike acceptance range is 75-125%.													

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

- RPD - Relative Percent Difference
- LCS - Laboratory Control Sample
- LCSD - Laboratory Control Sample Duplicate
- MS - Matrix Spike
- MS Dup - Matrix Spike Duplicate
- NC - No Criteria
- Intf - Interference


 Phyllis Shiller, Laboratory Director
 July 02, 2018

Monday, July 02, 2018

Criteria: None

State: CT

Sample Criteria Exceedances Report

GCA75215 - ATC-BRAN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL	Criteria	Analysis Units
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*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedances. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedance information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name: Phoenix Environmental Labs, Inc.

Client: ATC Group Services, LLC

Project Location: 209118

Project Number:

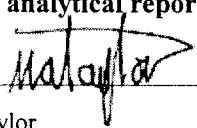
Laboratory Sample ID(s): CA75265-CA75271

Sampling Date(s): 6/21/2018

List RCP Methods Used (e.g., 8260, 8270, et cetera) None

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1A	Were the method specified preservation and holding time requirements met?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1B	<u>VPH and EPH methods only:</u> Was the VPH or EPH method conducted without significant modifications (see section 11.3 of respective RCP methods)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
2	Were all samples received by the laboratory in a condition consistent with that described on the associated Chain-of-Custody document(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3	Were samples received at an appropriate temperature (< 6 Degrees C)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5	a) Were reporting limits specified or referenced on the chain-of-custody? b) Were these reporting limits met?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
7	Are project-specific matrix spikes and laboratory duplicates included in the data set?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or 1B is "No", the data package does not meet the requirements for "Reasonable Confidence". This form may not be altered and all questions must be answered.

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.	
Authorized Signature: <u></u>	Position: <u>Project Manager</u>
Printed Name: <u>Maryam Taylor</u>	Date: <u>Monday, July 02, 2018</u>
Name of Laboratory <u>Phoenix Environmental Labs, Inc.</u>	

This certification form is to be used for RCP methods only.



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



RCP Certification Report

July 02, 2018

SDG I.D.: GCA75265

SDG Comments

Metals Analysis:

The client requested a site specific list of elements which is shorter than the RCP list.

Non RCP analyses are included with this report. The RCP narrative is provided at the request of the client.

Temperature above 6C:

The samples were received in a cooler with ice packs. The samples were delivered to the Laboratory within a short period of time after sample collection. Therefore no significant bias is suspected.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

Instrument:

BECKMAN DU720 #2 06/21/18-4 Michael Tran, Chemist 06/21/18
CA75265, CA75266, CA75267, CA75268, CA75269, CA75270, CA75271

BECKMAN DU720 06/21/18-1

CA75265, CA75266, CA75267, CA75268

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

BECKMAN DU720 06/22/18-1 Katherine Brown, Chemist 06/22/18

CA75269, CA75270, CA75271

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

HACH DR 5000 06/22/18-1

CA75265, CA75266, CA75267, CA75268, CA75269, CA75270, CA75271

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 435590 (CA74682)

CA75265, CA75266, CA75267, CA75268, CA75269, CA75270, CA75271

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional criteria matrix spike acceptance range is 75-125%.

Batch 435698 (CA75362)

CA75265, CA75266, CA75267, CA75268, CA75269, CA75270, CA75271

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: MS acceptance range 75-125%.
Additional criteria matrix spike acceptance range is 75-125%.



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RCP Certification Report

July 02, 2018

SDG I.D.: GCA75265

Wet Chemistry Analysis

Batch 435703 (CA75080)

CA75265, CA75271

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional criteria matrix spike acceptance range is 75-125%.

Batch 435707 (CA75385)

CA75266, CA75267, CA75268, CA75269, CA75270

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional criteria matrix spike acceptance range is 75-125%.

Batch 435761 (CA76175)

CA75265, CA75266, CA75267, CA75268, CA75269, CA75270, CA75271

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional criteria matrix spike acceptance range is 75-125%.

Batch 435827 (CA73421)

CA75265, CA75266, CA75267

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional criteria matrix spike acceptance range is 75-125%.

Batch 435828 (CA75321)

CA75268, CA75269, CA75270, CA75271

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional criteria matrix spike acceptance range is 75-125%.

QC (Site Specific):

Batch 435684 (CA75265)

CA75265, CA75266, CA75267, CA75268

All LCS recoveries were within 85 - 115 with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
Additional criteria matrix spike acceptance range is 75-125%.

Batch 435850 (CA75270)

CA75269, CA75270, CA75271

All LCS recoveries were within 85 - 115 with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
Additional criteria matrix spike acceptance range is 75-125%.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

BLUE 06/28/18 10:22

Emily Kolominskaya, Mike Arsenault, Chemist 06/28/18

CA75265, CA75266, CA75267, CA75268, CA75269, CA75270, CA75271

The initial calibration met criteria.

The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration



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Certification Report

July 02, 2018

SDG I.D.: GCA75265

ICP Metals Narration

range.

The continuing calibration blanks were less than the reporting level for the elements reported.

The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria. The linear range is defined daily by the calibration range.

The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.

The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.

The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Site Specific):

Batch 436430 (CA75265)

CA75265, CA75266, CA75267, CA75268, CA75269, CA75270, CA75271

All LCS recoveries were within 75 - 125 with the following exceptions: None.

All MS recoveries were within 75 - 125 with the following exceptions: None.

LACHAT

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

Instrument:

LACHAT 06/21/18-1

Mike Cottle, Chemist 06/21/18

CA75265, CA75266, CA75267, CA75268, CA75269, CA75270, CA75271

The initial calibration met all criteria including a standard run at the reporting level.

All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 435650 (CA74718)

CA75265, CA75266, CA75267, CA75268, CA75269, CA75270

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 435652 (CA75428)

CA75271

All LCS recoveries were within 90 - 110 with the following exceptions: None.

NITROGEN

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

Instrument:

LACHAT 06/22/18-1

William H. McKernan, Chemist 06/22/18

CA75265, CA75266, CA75267, CA75268, CA75269

The initial calibration met all criteria including a standard run at the reporting level.

All method verification standards and blanks met criteria.

LACHAT 06/25/18-1

William H. McKernan, Chemist 06/25/18



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RCP Certification Report

July 02, 2018

SDG I.D.: GCA75265

NITROGEN

CA75270, CA75271

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 435619 (CA74673)

CA75265, CA75266, CA75267, CA75268, CA75269

All LCS recoveries were within 85 - 115 with the following exceptions: None.
TKN is reported as Organic Nitrogen in the Blank, LCS, DUP and MS.

Batch 435936 (CA74915)

CA75270, CA75271

All LCS recoveries were within 85 - 115 with the following exceptions: None.
TKN is reported as Organic Nitrogen in the Blank, LCS, DUP and MS.

Temperature Narration

The samples were received at 9.8C with cooling initiated.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

CHAIN OF CUSTODY RECORD



587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
 Email: info@phoenixlabs.com Fax (860) 645-0823
 Client Services (860) 645-8726

Coolant: Yes No
 IPK ICE
 Temp 9.8 °C Pg of

Data Delivery:
 Fax #
 Email: Luke.Whitehouse@phoenixlabs.com

Customer: AIC Group Services
 Address: 33 Business Park Dr
Branford, CT 06405

Project: 279118
 Report to: Lake Whitehouse
 Invoice to: AIC
 Phone #: (860) 498-9481
 Fax #:

Project P.O.:

This section MUST be completed with Bottle Quantities.

Sampler's Signature: _____ Date: _____
 Client Sample - Information - Identification
 Matrix Code: Storm
 DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
 RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe
 OIL=Oil B=Bulk L=Liquid

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Analysis Request
75265	0180	SW	6-21-18	0140	GL VOA Vials [Methanol] [H2O]
75266	3140	SW		0155	GL VOA Vial [As Is] [HCl]
75267	3154D	SW		0330	GL Amber 1000ml [As Is] [HCl]
75268	3145	SW		0130	PL HNO3 250ml [As Is] [H2SO4]
75269	3163	SW		0340	PL HNO3 250ml [As Is] [H2SO4]
75270	3111	SW		0355	PL HNO3 250ml [As Is] [H2SO4]
75271	3245	SW	6-21-18	0145	PL NaOH 250ml [As Is]
					Bacteria (as Is)
					Bacteria (witho)

O.I.T. Grease
 Grease
 TSS
 Total COD
 Total TKN
 Total Entero cocci

Relinquished by: [Signature]
 Accepted by: K Della Bella
 Date: 6/21/18 Time: 7:06

RI Direct Exposure (Residential) GW Other

CT RCP Cert GW Protection SW Protection GA Mobility GB Mobility Residential DEC I/C DEC Other

MA MCP Certification GW-1 GW-2 GW-3 S-1 S-2 S-3 MWRA eSMART Other

Data Format
 Excel PDF GIS/Key EQUIS Other

Data Package
 Tier II Checklist Full Data Package* Phoenix Std Report Other

Turnaround:
 1 Day* 2 Days* 3 Days* Standard Other

Comments, Special Requirements or Regulations:

State where samples were collected: _____

* SURCHARGE APPLIES

LABORATORY REPORT AND CHAIN OF CUSTODY

06/28/2018