## Appendix 5

## 2018 MS4 Stormwater Annual Report

**Water Testing Data** 

Part 4



Tuesday, November 20, 2018

Attn: Mr. Luke Whitehouse ATC Associates 290 Roberts St., Suite 301 East Hartford, CT 06108

Project ID: 204118 NEW HAVEN STORMWATER

Sample ID#s: CB96275 - CB96285

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,

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



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

## **Analysis Report**

November 20, 2018

FOR: Attn: Mr. Luke Whitehouse

**ATC Associates** 

see "By" below

AP

LB

290 Roberts St., Suite 301 East Hartford, CT 06108

Sample Information

Matrix:

STORM WATER

Location Code:

ATC-EHDAS

Rush Request:

Standard

07

aboratory Data.

**Custody Information** 

Collected by:

Received by:

Analyzed by:

SDG ID: GCB96275

<u>Time</u>

2:30

8:00

P.O.#:

Phoenix ID: CB96275

<u>Date</u>

11/13/18

11/13/18

Project ID:

204118 NEW HAVEN STORMWATER

Client ID:

Doromotor	Daniell	RL/	1.1-14-	D21 (1)	<b>.</b>	_	5.4
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
Boron	0.05	0.05	mg/L	1	11/14/18	CPP	SW6010C
Mardness (CaCO3)	101	0.1	mg/L	1	11/15/18		E200.7
- Fischerichia Coli	~24200	10	MPN/100 mls	10	11/13/18 08:25	KD8/KD8	SM9223B-04
Enterococci Bacteria	>24200	10	MPN/100 mls	10	11/13/18 08:25	KDB/KDE	Enterolert
Fecal Coliforms MPN	>24200	10	MPN/100 mls	1	11/13/18 10:00	RM/KDB	Colilert-18
Total Coliforms	>24200	10	MPN/100 mls	10	11/13/18 08:25	KDB/KDE	3 SW9223B-06
Chlorine Residual	< 0.02	0.02	mg/L	1	11/13/18 18:59	0	SM4500CI-G-00
C.O.D.	152	10	mg/L	1	11/15/18	MSF	SM5220D-11
Conductivity	505	5.00	umhos/cm	1	11/14/18	RR/EG	SM2510B-11
MBAS	0.86	0.05	mg/L	1	11/13/18 22:26	S	SM5540 C-11
Ammonia as Nitrogen	5.14	0.05	mg/L	1	11/17/18	KDB	E350.1
Nitrite-N	0.070	0.010	mg/L	1	11/13/18 18:15	TB	E353.2
Nitrate-N	1.02	0.02	mg/L	1	11/13/18 18:15	TB	E353.2
Oil and Grease by EPA 1664	6.7	1.4	mg/L	1	11/13/18	MSF	E1664A
Salinity	< 0.5	0.5	ppt	1	11/15/18	RWR	SM2520B-10
Nitrogen Tot Kjeldahl	13.6	0.20	mg/L	2	11/17/18	KDB	E351.1
Phosphorus, as P	1.34	0.050	mg/L	5	11/13/18	MI	SM4500PE-11
Total Suspended Solids	82	7.7	mg/L	1.5	11/14/18	MM/EG	SM2540D-11
Total Metals Digestion	Completed				11/13/18	AG	

Client ID: 07

Phoenix I.D.: CB96275

Result

RL/ PQL

Units

Dilution

Date/Time

By Reference

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

#### **Comments:**

Parameter

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.

This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director

November 20, 2018



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

## **Analysis Report**

November 20, 2018

FOR: Attn: Mr. Luke Whitehouse

**ATC Associates** 

290 Roberts St., Suite 301 East Hartford, CT 06108

Sample Information

Matrix:

P.O.#:

STORM WATER

Location Code:

ATC-EHDAS

Rush Request:

Standard

Received by: LB Analyzed by: see "By" below

**Custody Information** 

Collected by:

SDG ID: GCB96275 Phoenix ID: CB96276

<u>Time</u>

2:55

8:00

<u>Date</u>

11/13/18

11/13/18

.aboratory Data

Project ID:

204118 NEW HAVEN STORMWATER

Client ID:

011

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	D.,	Deference
	result	1 0()	Office	Dilution	Date/Time	Ву	Reference
Boron	< 0.05	0.05	mg/L	1	11/14/18	CPP	SW6010C
Hardness (CaCO3)	43.2	0.1	mg/L	1 .	11/15/18		E200.7
Escherichia Coli e,	609	10	MPN/100 mls	10		KOB/KDI	9 SM9223B-04
Enterococci Bacteria	602	10	MPN/100 mls	10	11/13/18 08:25	KDB/KDI	B Enterolert
Fecal Coliforms MPN	383	10	MPN/100 mls	1	11/13/18 10:00	RM/KDE	Colilert-18
Total Coliforms	17300	10	MPN/100 mls	10	11/13/18 08:25	KDB/KDI	B SW9223B-06
Chlorine Residual	< 0.02	0.02	mg/L	1	11/13/18 19:01	0	SM4500CI-G-00
C.O.D.	19	10	mg/L	1	11/15/18	MSF	SM5220D-11
Conductivity	186	5.00	umhos/cm	1	11/14/18	RR/EG	SM2510B-11
MBAS	0.09	0.05	mg/L	1	11/13/18 22:28	s	SM5540 C-11
Ammonia as Nitrogen	0.17	0.05	mg/L	1	11/17/18	KDB	E350.1
Nitrite-N	< 0.010	0.010	mg/L	1	11/13/18 18:18	TB	E353.2
Nitrate-N	0.49	0.02	mg/L	1	11/13/18 18:18	TB	E353.2
Oil and Grease by EPA 1664	< 1.4	1.4	mg/L	1	11/13/18	MSF	E1664A
Salinity	< 0.5	0.5	ppt	1	11/15/18	RWR	SM2520B-10
Nitrogen Tot Kjeldahl	0.48	0.10	mg/L	1	11/17/18	KDB	E351.1
Phosphorus, as P	0.076	0.010	mg/L	1	11/13/18	МІ	SM4500PE-11
Total Suspended Solids	7.0	5.0	mg/L	1	11/14/18	MM/EG	SM2540D-11
Total Metals Digestion	Completed				11/13/18	AG	

Client ID: 011

Phoenix I.D.: CB96276

RL/

**PQL** Parameter Result Units Dilution Date/Time Ву Reference

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

November 20, 2018



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

## **Analysis Report**

November 20, 2018

FOR:

AP

LB

Attn: Mr. Luke Whitehouse

ATC Associates

see "By" below

290 Roberts St., Suite 301 East Hartford, CT 06108

Sample Information

Matrix:

P.O.#:

STORM WATER

Location Code:

ATC-EHDAS

Rush Request:

Standard

**Laboratory Data** 

**Custody Information** 

Collected by:

Received by:

Analyzed by:

SDG ID: GCB96275

Phoenix ID: CB96277

Date

11/13/18

11/13/18

<u>Time</u>

3:05

8:00

Project ID:

204118 NEW HAVEN STORMWATER

Client ID:

**CB159** 

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference
Boron	< 0.05	0.05	mg/L	1	11/14/18	CPP	SW6010C
Hardness (CaCO3)	17.5	0.1	mg/L	1	11/15/18		E200.7
Earnorichia Coli	243	10	MPN/100 ms	10	14/13/18 09:75	KDalkot	SM9223B-04
Enterococci Bacteria	862	10	MPN/100 mls	10	11/13/18 08:25	KDB/KDE	3 Enterolert
Fecal Coliforms MPN	134	10	MPN/100 mls	1	11/13/18 10:00	RM/KDB	Colilert-18
Total Coliforms	>24200	10	MPN/100 mls	10	11/13/18 08:25	KDB/KDE	SW9223B-06
Chlorine Residual	0.03	0.02	mg/L	1	11/13/18 19:02	0	SM4500CI-G-00
C.O.D.	139	10	mg/L	1	11/15/18	MSF	SM5220D-11
Conductivity	37	5.00	umhos/cm	1	11/14/18	RR/EG	SM2510B-11
MBAS	0.07	0.05	mg/L	1	11/13/18 22:29	s	SM5540 C-11
Ammonia as Nitrogen	< 0.10	0.10	mg/L	2	11/17/18	KDB	E350.1
Nitrite-N	< 0.010	0.010	mg/L	1	11/13/18 18:23	TB	E353.2
Nitrate-N	< 0.02	0.02	mg/L	1	11/13/18 18:23	TB	E353.2
Oil and Grease by EPA 1664	< 1.4	1.4	mg/L	1	11/13/18	MSF	E1664A
Salinity	< 0.5	0.5	ppt	1	11/15/18	RWR	SM2520B-10
Nitrogen Tot Kjeldahl	0.79	0.20	mg/L	2	11/17/18	KDB	E351.1
Phosphorus, as P	0.452	0.010	mg/L	1	11/13/18	MI	SM4500PE-11
Total Suspended Solids	17	5.7	mg/L	1.1	11/14/18	MM/EG	SM2540D-11
Total Metals Digestion	Completed				11/13/18	AG	

Client ID: CB159

Phoenix I.D.: CB96277

Parameter Result PQL Units Dilution Date/Time Ву Reference

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

RL/

#### **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

November 20, 2018



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

## **Analysis Report**

November 20, 2018

FOR: Attn: Mr. Luke Whitehouse

**ATC Associates** 

290 Roberts St., Suite 301 East Hartford, CT 06108

Sample Information

STORM WATER Matrix:

Location Code: ATC-EHDAS Rush Request:

Standard

P.O.#:

**Custody Information** <u>Date</u> <u>Time</u> Collected by: 11/13/18 3:30 Received by: LB 11/13/18 8:00

Analyzed by: see "By" below

.aboratory Data

SDG ID: GCB96275 Phoenix ID: CB96278

Project ID:

204118 NEW HAVEN STORMWATER

\_\_\_\_

Client ID: **CB166A** 

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference
Boron	< 0.05	0.05	mg/L	1	11/14/18	CPP	SW6010C
Hardness (CaCO3)	14.2	0.1	mg/L	4 .	11/15/18	OI I	E200.7
* *	146	10	* #******** ·	,	11/13/18-08-25	1	
22,07 G1 88500000 40000 1000 11							
Enterococci Bacteria	24200	10	MPN/100 mls	10	11/13/18 08:25		
Fecal Coliforms MPN	388	10	MPN/100 mls	1	11/13/18 10:00	RM/KDE	Colilert-18
Total Coliforms	>24200	10	MPN/100 mls	10	11/13/18 08:25	KDB/KDI	3 SW9223B-06
Chlorine Residual	< 0.02	0.02	mg/L	1	11/13/18 19:02	0	SM4500CI-G-00
C.O.D.	294	10	mg/L	1	11/15/18	MSF	SM5220D-11
Conductivity	84	5.00	umhos/cm	1	11/14/18	RR/EG	SM2510B-11
MBAS	0.06	0.05	mg/L	1	11/13/18 22:30	s	SM5540 C-11
Ammonia as Nitrogen	0.31	0.10	mg/L	2	11/17/18	KDB	E350.1
Nitrite-N	< 0.010	0.010	mg/L	1	11/13/18 18:24	ТВ	E353.2
Nitrate-N	< 0.02	0.02	mg/L	1	11/13/18 18:24	TB	E353.2
Oil and Grease by EPA 1664	< 1.4	1.4	mg/L	1	11/13/18	MSF	E1664A
Salinity	< 0.5	0.5	ppt	1	11/15/18	RWR	SM2520B-10
Nitrogen Tot Kjeldahl	3.11	0.20	mg/L	2	11/17/18	KDB	E351.1
Phosphorus, as P	1.21	0.050	mg/L	5	11/13/18	MI	SM4500PE-11
Total Suspended Solids	39	11	mg/L	2.3	11/14/18	MM/EG	SM2540D-11
Total Metals Digestion	Completed				11/13/18	AG	

Client ID: CB166A

Phoenix I.D.: CB96278

RL/

Parameter Result PQL Units Dilution Date/Time By Reference

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

November 20, 2018



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

## **Analysis Report**

November 20, 2018

FOR: Attn: Mr. Luke Whitehouse

**ATC Associates** 

see "By" below

290 Roberts St., Suite 301 East Hartford, CT 06108

Sample Information

Matrix:

STORM WATER

Location Code:

ATC-EHDAS

Rush Request: Standard

P.O.#:

**Custody Information** Collected by:

AP Received by:

LB

<u>Date</u> 11/13/18 Time 3:40

11/13/18

8:00

**Laboratory Data** 

Analyzed by:

SDG ID: GCB96275 Phoenix ID: CB96279

Project ID:

204118 NEW HAVEN STORMWATER

CB172 Client ID:

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference
Boron	< 0.05	0.05	mg/L	1	11/14/18	CPP	SW6010C
Hardness (CaCO3)	13.2	0.1	mg/L	1	11/15/18		E200.7
Escherichta Coll	439	10	MPN/100 mls	119 -	- 14/12/1e os:25	KDB/KD	9 SM92238-04
Enterococci Bacteria	650	10	MPN/100 mis	10	11/13/18 08:25	KDB/KDI	3 Enterolert
Fecal Coliforms MPN	148	10	MPN/100 mls	1	11/13/18 10:00	RM/KDE	Colilert-18
Total Coliforms	>24200	10	MPN/100 mls	10	11/13/18 08:25	KDB/KDI	3 SW9223B-06
Chlorine Residual	< 0.02	0.02	mg/L	1	11/13/18 19:03	0	SM4500CI-G-00
C.O.D.	127	10	mg/L	1	11/15/18	MSF	SM5220D-11
Conductivity	34	5.00	umhos/cm	1	11/14/18	RR/EG	SM2510B-11
MBAS	< 0.05	0.05	mg/L	1	11/13/18 22:31	s	SM5540 C-11
Ammonia as Nitrogen	< 0.10	0.10	mg/L	2	11/17/18	KDB	E350.1
Nitrite-N	< 0.010	0.010	mg/L	1	11/13/18 18:25	TB	E353.2
Nitrate-N	< 0.02	0.02	mg/L	1	11/13/18 18:25	TB	E353.2
Oil and Grease by EPA 1664	< 1.4	1.4	mg/L	1	11/13/18	MSF	E1664A
Salinity	< 0.5	0.5	ppt	1	11/15/18	RWR	SM2520B-10
Nitrogen Tot Kjeldahl	0.72	0.20	mg/L	2	11/17/18	KDB	E351.1
Phosphorus, as P	0.492	0.010	mg/L	1	11/13/18	MI	SM4500PE-11
Total Suspended Solids	66	10	mg/L	2	11/14/18	MM/EG	SM2540D-11
Total Metals Digestion	Completed				11/13/18	AG	

Client ID: CB172

Phoenix I.D.: CB96279

RL/

Parameter Result PQL Units Dilution Date/Time By Reference

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

November 20, 2018



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## **Analysis Report**

November 20, 2018

FOR: Attn: Mr. Luke Whitehouse

ATC Associates

290 Roberts St., Suite 301 East Hartford, CT 06108

Sample Information

Matrix:

STORM WATER

Location Code:

ATC-EHDAS

Rush Request:

Standard

**CB214** 

P.O.#:

Custody Information
Collected by: AP

Collected by: AP Received by: LB

11/1

11/13/18 3:55 11/13/18 8:00

Date

Time

see "By" below

Laboratory Data

Analyzed by:

SDG ID: GCB96275 Phoenix ID: CB96280

Project ID:

204118 NEW HAVEN STORMWATER

Client ID:

RL/ PQL Units Dilution Date/Time Reference Parameter Result By SW6010C < 0.05 0.05 mg/L 1 11/15/18 ΕK Boron E200.7 12.7 0.1 mg/L 1 11/15/18 Hardness (CaCO3) Escherichia Call 161 10 MPN/100 mis 10--11/13/16 03.25 KDB/KDB SM9223B-04 >24200 10 MPN/100 mls 10 Enterococci Bacteria 11/13/18 08:25 KDB/KDB Enterolert Fecal Coliforms MPN 231 10 MPN/100 mls 1 11/13/18 10:00 RM/KDB Colilert-18 11/13/18 08:25 KDB/KDB SW9223B-06 >24200 MPN/100 mls 10 **Total Coliforms** 10 mg/L 0.03 0.02 1 11/13/18 19:04 0 SM4500CI-G-00 Chlorine Residual 199 10 mg/L 11/15/18 MSF SM5220D-11 C.O.D. 61 5.00 umhos/cm 11/14/18 RR/EG SM2510B-11 Conductivity 0.09 0.05 S SM5540 C-11 mg/L 11/13/18 22:32 **MBAS** 11/17/18 KDB E350.1 Ammonia as Nitrogen 0.21 0.10 mg/L 2 11/13/18 18:26 < 0.010 0.010 1 TB E353.2 Nitrite-N mg/L Nitrate-N < 0.02 0.02 mg/L 11/13/18 18:26 TB E353.2 MSF E1664A 1 11/13/18 Oil and Grease by EPA 1664 < 1.4 1.4 mg/L SM2520B-10 < 0.5 0.5 1 11/15/18 RWR ppt Salinity 2 **KDB** E351.1 Nitrogen Tot Kjeldahl 1.99 0.20 mg/L 11/17/18 0.050 5 11/13/18 SM4500PE-11 Phosphorus, as P 1.91 mg/L MI 68 15 2.9 11/14/18 MM/EG SM2540D-11 Total Suspended Solids mg/L 11/13/18 AG **Total Metals Digestion** Completed

Client ID: CB214

RL/

Parameter Result PQL Units Dilution Date/Time By Reference

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

November 20, 2018

Reviewed and Released by: Rashmi Makol, Project Manager

Phoenix I.D.: CB96280



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

**Custody Information** 

Collected by: Received by:

**Analysis Report** 

November 20, 2018

FOR: Attn: Mr. Luke Whitehouse

ATC Associates

290 Roberts St., Suite 301 East Hartford, CT 06108

Sample Information

Matrix: STORM WATER Location Code: ATC-EHDAS

Location Code:

Ctandard

Rush Request: Standard

P.O.#:

Received by: LB
Analyzed by: see "By" below

Laboratory Data

SDG ID: GCB96275 Phoenix ID: CB96281

<u>Time</u>

4:20

8:00

<u>Date</u>

11/13/18

11/13/18

Project ID:

204118 NEW HAVEN STORMWATER

Client ID: CB689

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference
Boron	< 0.05	0.05	mg/L	1	11/14/18	CPP	SW6010C
Hardness (CaCO3)	1.3	0.1	mg/L	1	11/15/18		E200.7
Escherishin Cell	41	10	MPN/100 mis	19	11/13/15 08:25	KDB/KDE	SM9223B-04
Enterococci Bacteria	201	10	MPN/100 mls	10	11/13/18 08:25	KDB/KDE	Enterolert
Fecal Coliforms MPN	31	10	MPN/100 mls	1	11/13/18 10:00	RM/KDB	Colilert-18
Total Coliforms	17300	10	MPN/100 mls	10	11/13/18 08:25	KDB/KDE	SW9223B-06
Chlorine Residual	0.03	0.02	mg/L	1	11/13/18 19:05	0	SM4500CI-G-00
C.O.D.	< 10	10	mg/L	1	11/15/18	MSF	SM5220D-11
Conductivity	11	5.00	umhos/cm	1	11/14/18	RR/EG	SM2510B-11
MBAS	< 0.05	0.05	mg/L	1	11/13/18 22:35	s	SM5540 C-11
Ammonia as Nitrogen	< 0.05	0.05	mg/L	1	11/17/18	KDB	E350.1
Nitrite-N	< 0.010	0.010	mg/L	1	11/13/18 18:27	TB	E353.2
Nitrate-N	0.05	0.02	mg/L	1	11/13/18 18:27	TB	E353.2
Oil and Grease by EPA 1664	< 1.4	1.4	mg/L	1	11/13/18	MSF	E1664A
Salinity	< 0.5	0.5	ppt	1	11/15/18	RWR	SM2520B-10
Nitrogen Tot Kjeldahl	0.13	0.10	mg/L	1	11/17/18	KDB	E351.1
Phosphorus, as P	0.115	0.010	mg/L	1	11/13/18	MI	SM4500PE-11
Total Suspended Solids	25	5.0	mg/L	1	11/14/18	MM/EG	SM2540D-11
Total Metals Digestion	Completed				11/13/18	AG	

Client ID: CB689

Phoenix I.D.: CB96281

RL/

Parameter Result PQL Units Dilution Date/Time By Reference

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.

This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director

November 20, 2018



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

## **Analysis Report**

November 20, 2018

FOR: Attn: Mr. Luke Whitehouse

**ATC Associates** 

290 Roberts St., Suite 301 East Hartford, CT 06108

Sample Informa	<u>ition</u>	Custody Inform	<u>nation</u>	<u>Date</u>	<u>Time</u>
Matrix:	STORM WATER	Collected by:	AP	11/13/18	4:40
Location Code:	ATC-EHDAS	Received by:	LB	11/13/18	8:00
	O. 1 1				

Rush Request: Standard Analyzed by: see "By" below

**Laboratory Data** 

SDG ID: GCB96275 Phoenix ID: CB96282

Project ID: 204118 NEW HAVEN STORMWATER

Client ID: CB771

P.O.#:

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference
Boron	< 0.05	0.05	mg/L	1	11/14/18	CPP	SW6010C
Hardness (CaCO3)	42.9	0.1	mg/L	1	11/15/18		E200.7
Escheriable-Coll-	>24200	10	MPN/100 mis	10	~11/13/18 08.25	KEBAKDI	SM9223B-04
Enterococci Bacteria	>24200	10	MPN/100 mls	10	11/13/18 08:25	KDB/KDI	3 Enterolert
Fecal Coliforms MPN	>24200	10	MPN/100 mls	1	11/13/18 10:00	RM/KDE	Colilert-18
Total Coliforms	>24200	10	MPN/100 mls	10	11/13/18 08:25	KDB/KD	3 SW9223B-06
Chlorine Residual	< 0.02	0.02	mg/L	1	11/13/18 19:08	0	SM4500CI-G-00
C.O.D.	298	10	mg/L	1	11/15/18	MSF	SM5220D-11
Conductivity	139	5.00	umhos/cm	1	11/14/18	RR/EG	SM2510B-11
MBAS	0.16	0.05	mg/L	1	11/13/18 22:36	s	SM5540 C-11
Ammonia as Nitrogen	0.36	0.10	mg/L	2	11/17/18	KDB	E350.1
Nitrite-N	0.012	0.010	mg/L	1	11/13/18 18:28	TB	E353.2
Nitrate-N	< 0.02	0.02	mg/L	1	11/13/18 18:28	TB	E353.2
Oil and Grease by EPA 1664	< 1.4	1.4	mg/L	1	11/13/18	MSF	E1664A
Salinity	< 0.5	0.5	ppt	1	11/15/18	RWR	SM2520B-10
Nitrogen Tot Kjeldahl	3.12	0.20	mg/L	2	11/17/18	KDB	E351.1
Phosphorus, as P	0.890	0.020	mg/L	2	11/13/18	MI	SM4500PE-11
Total Suspended Solids	140	17	mg/L	3.3	11/14/18	MM/E	S SM2540D-11
Total Metals Digestion	Completed				11/13/18	AG	

Project ID: 204118 NEW HAVEN STORMWATER Phoenix I.D.: CB96282

Client ID: CB771

RL/

Parameter Result PQL Units Dilution Date/Time By Reference

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

#### Comments:

-000

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

November 20, 2018



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## **Analysis Report**

November 20, 2018

FOR: Attn: Mr. Luke Whitehouse

ATC Associates

290 Roberts St., Suite 301 East Hartford, CT 06108

Sample Informat	<u>tion</u>	Custody Inform	<u>nation</u>	<u>Date</u>	<u>Time</u>
Matrix:	STORM WATER	Collected by:	AP	11/13/18	4:50
Location Code:	ATC-EHDAS	Received by:	LB	11/13/18	8:00

Rush Request: Standard Analyzed by: see "By" below

P.O.#: Laboratory Dat

Laboratory Data SDG ID: GCB96275

Phoenix ID: CB96283

Project ID: 204118 NEW HAVEN STORMWATER

Client ID: 012

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference
Boron	< 0.05	0.05	mg/L	1.	11/14/18	CPP	SW6010C
Hardness (CaCO3)	26.3	0.1	mg/L	1	11/15/18		E200.7
Escheriatio Coll	5480	40	MPN/100 mls	10-	11/T3/18 08:25	KDS/KDI	SM9223B-04
Enterococci Bacteria	5170	10	MPN/100 mls	10	11/13/18 08:25	KDB/KD	3 Enterolert
Fecal Coliforms MPN	1860	10	MPN/100 mls	1	11/13/18 10:00	RM/KDB	Colilert-18
Total Coliforms	>24200	10	MPN/100 mls	10	11/13/18 08:25	KDB/KDI	3 SW9223B-06
Chlorine Residual	< 0.02	0.02	mg/L	1	11/13/18 19:09	0	SM4500CI-G-00
C.O.D.	23	10	mg/L	1	11/15/18	MSF	SM5220D-11
Conductivity	106	5.00	umhos/cm	1	11/14/18	RR/EG	SM2510B-11
MBAS	< 0.05	0.05	mg/L	1	11/13/18 22:37	s	SM5540 C-11
Ammonia as Nitrogen	< 0.05	0.05	mg/L	1	11/17/18	KDB	E350.1
Nitrite-N	< 0.010	0.010	mg/L	1	11/13/18 18:29	ТВ	E353.2
Nitrate-N	0.18	0.02	mg/L	1	11/13/18 18:29	TB	E353.2
Oil and Grease by EPA 1664	< 1.4	1.4	mg/L	1	11/13/18	MSF	E1664A
Salinity	< 0.5	0.5	ppt	1	11/15/18	RWR	SM2520B-10
Nitrogen Tot Kjeldahl	0.26	0.10	mg/L	1	11/17/18	KDB	E351.1
Phosphorus, as P	0.229	0.010	mg/L	1	11/13/18	MI	SM4500PE-11
Total Suspended Solids	6.0	5.0	mg/L	1	11/14/18	MM/EG	S SM2540D-11
Total Metals Digestion	Completed				11/13/18	AG	

Client ID: 012

RL/
Parameter Result PQL Units Dilution Date/Time By Reference

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

November 20, 2018

Reviewed and Released by: Rashmi Makol, Project Manager

Phoenix I.D.: CB96283



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## **Analysis Report**

November 20, 2018

014

FOR:

Attn: Mr. Luke Whitehouse

ATC Associates

see "By" below

290 Roberts St., Suite 301 East Hartford, CT 06108

Samp	le li	ntorm	nation

Matrix: Location Code:

Rush Request:

STORM WATER

ATC-EHDAS

Standard

P.O.#:

Custody	Information

Collected by:
Received by:

AP LB 11/13/18

Date

<u>Time</u> 5:30

11/13/18

8:00

SDG ID: GCB96275

Laboratory Data

Analyzed by:

Phoenix ID: CB96284

Project ID:

204118 NEW HAVEN STORMWATER

Client ID:

RL/ **PQL** Units Dilution Date/Time Reference Parameter Result By SW6010C < 0.05 0.05 mg/L 1 11/14/18 CPP Boron E200.7 Hardness (CaCO3) 41.4 0.1 mg/L 11/15/18 Eschariofile Coll 3450 10 MPN/100 rals 10. 11/13/16 08:25 KB5/KOB SM9223B-04 MPN/100 mls 2280 10 10 Enterococci Bacteria 11/13/18 08:25 KDB/KDB Enterolert Fecal Coliforms MPN 588 10 MPN/100 mls 1 11/13/18 10:00 RM/KDB Colilert-18 MPN/100 mls 11/13/18 08:25 KDB/KDB SW9223B-06 >24200 10 **Total Coliforms** 10 < 0.02 0.02 mg/L 1 0 SM4500CI-G-00 Chlorine Residual 11/13/18 19:10 42 10 mg/L 1 11/15/18 MSF SM5220D-11 C.O.D. 118 5.00 umhos/cm 1 11/14/18 RR/EG SM2510B-11 Conductivity 0.05 S SM5540 C-11 0.07 mg/L 1 11/13/18 22:38 **MBAS** 11/17/18 **KDB** Ammonia as Nitrogen < 0.05 0.05 mg/L 1 E350.1 < 0.010 0.010 mg/L 1 11/13/18 18:30 TB E353.2 Nitrite-N Nitrate-N 0.48 0.02 mg/L 11/13/18 18:30 TB E353.2 MSF Oil and Grease by EPA 1664 1 11/13/18 E1664A < 1.4 1.4 mg/L SM2520B-10 < 0.5 0.5 1 11/15/18 RWR Salinity ppt Nitrogen Tot Kjeldahl 0.44 0.10 mg/L 1 11/17/18 KDB E351.1 0.278 0.010 11/13/18 SM4500PE-11 Phosphorus, as P mg/L 1 19 5.0 11/14/18 MM/EG SM2540D-11 **Total Suspended Solids** mg/L 1 Completed 11/13/18 AG **Total Metals Digestion** 

Client ID: 014

Phoenix I.D.: CB96284

RL/

Parameter Result PQL Units Dilution Date/Time By Reference

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

November 20, 2018



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## **Analysis Report**

November 20, 2018

FOR: Attn: Mr. Luke Whitehouse

ATC Associates

290 Roberts St., Suite 301 East Hartford, CT 06108

Sample Information

Matrix: STORM WATER

Location Code:

ATC-EHDAS

Rush Request:

Standard

**Custody Information** Collected by:

AP LB Date 11/13/18 Time 6:00

11/13/18

8:00

Received by: Analyzed by:

see "By" below

.aboratory Data

SDG ID: GCB96275

Phoenix ID: CB96285

Project ID:

P.O.#:

204118 NEW HAVEN STORMWATER

Client ID: 066

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	Ву	Reference
Boron	< 0.05	0.05	mg/L	1	11/14/18	CPP	SW6010C
Hardness (CaCO3)	6.0	0.1	mg/L	1 .	11/15/18		E200.7
Escharichis Cell	3080	40	MPN/100 mls	14.	11/19/18 08:25	KOB.KDS	3 SM9223B-04
Enterococci Bacteria	2190	10	MPN/100 mls	10	11/13/18 08:25	KDB/KDE	3 Enterolert
Fecal Coliforms MPN	1480	10	MPN/100 mls	1	11/13/18 10:00	RM/KDB	Colilert-18
Total Coliforms	>24200	10	MPN/100 mls	10	11/13/18 08:25	KDB/KDE	3 SW9223B-06
Chlorine Residual	0.02	0.02	mg/L	1	11/13/18 19:11	0	SM4500CI-G-00
C.O.D.	38	10	mg/L	1	11/15/18	MSF	SM5220D-11
Conductivity	24	5.00	umhos/cm	1	11/14/18	RR/EG	SM2510B-11
MBAS	< 0.05	0.05	mg/L	1	11/13/18 22:39	s	SM5540 C-11
Ammonia as Nitrogen	0.15	0.05	mg/L	1	11/17/18	KDB	E350.1
Nitrite-N	< 0.010	0.010	mg/L	1	11/13/18 18:31	ТВ	E353.2
Nitrate-N	0.08	0.02	mg/L	1	11/13/18 18:31	ТВ	E353.2
Oil and Grease by EPA 1664	< 1.4	1.4	mg/L	1	11/13/18	MSF	E1664A
Salinity	< 0.5	0.5	ppt	1	11/15/18	RWR	SM2520B-10
Nitrogen Tot Kjeldahl	0.41	0.10	mg/L	1	11/17/18	KDB	E351.1
Phosphorus, as P	0.182	0.010	mg/L	1	11/13/18	MI	SM4500PE-11
Total Suspended Solids	12	5.0	mg/L	1	11/14/18	MM/EG	S SM2540D-11
Total Metals Digestion	Completed				11/13/18	AG	

Client ID: 066

Phoenix I.D.: CB96285

RL/

Parameter Result PQL Units Dilution Date/Time By Reference

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

November 20, 2018



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## QA/QC Report

November 20, 2018

QA/QC Data

SDG I.D.: GCB96275

												%	%	
		Blk	Sample	Dup	Dup	LCS	LCSD	LCS	MS	MSD	MS	Rec	RPD	
Parameter	Blank	RL	Result	Result	RPD	%	%	RPD	%	%	RPD	Limits	Limits	
OA/OC Botch 456163 (mg/L)	OC Samo	lo No	CR01566	(CB063)	75 CB	06276	CB0627	77 CBC	1627g	CB06270	CRO	6280	CB0628	1

QA/QC Batch 456163 (mg/L), QC Sample No: CB91566 (CB96275, CB96276, CB96277, CB96278, CB96279, CB96280, CB96281, CB96282, CB96283, CB96284, CB96285)

ICP Metals - Aqueous

Boron BRL 0.05 <0.05 <0.05 NC 95.3 94.7 75-125 20



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## QA/QC Report

OA/OC Data

November 20, 2018				<u>QA/0</u>	QC E	<u>ata</u>				SDG I.I	D.: G	CB962	275
Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 456055 (mg/L), Q	C Samp	ole No:	CB92522	(CB962	75, CB	96276,	CB9627	77, CB9	6278,	CB96279	, CB9	6280, C	B96281,
CB96282, CB96283, CB96284, Oil and Grease by EPA 1664A Comment:	CB9628 BRL	35) 1.4				97.0	99.0	2.0				85 - 115	20
Additional: MS acceptance range	75-125%	, b.											
QA/QC Batch 456259 (mg/L), Q CB96282, CB96283, CB96284,			CB92532	(CB962	75, CB	96276,	CB9627	77, CB9	6278,	CB96279	, CB9	6280, C	B96281,
Total Suspended Solids	BRL	5.0	10	11	NC	90.0						85 - 115	20
QA/QC Batch 456145 (mg/L), Q CB96282, CB96283, CB96284,			CB92776	(CB962	75, CB	96276,	CB9627	77, CB9	6278,	CB96279	, CB9	6280, C	B96281,
Phosphorus, as P Comment:	BRL	0.01	0.017	0.019	NC	103			101			85 - 115	20
Additional criteria matrix spike acc	eptance	range is	s 75-125%.										
QA/QC Batch 456156 (mg/L), Q CB96282, CB96283, CB96284,			CB96275	(CB962	75, CB	96276,	CB962	77, CB9	6278,	CB96279	), CB9	6280, C	B96281,
MBAS Comment.	BRL	0.03	08.0	0.85	1.20	97.3			84.3			85 - มร์	20
Additional criteria matrix spike acc	eptance	range is	s 75-125%.										
QA/QC Batch 456385 (mg/L), QCB96282, CB96283, CB96284,			: CB96276	(CB962	?75, CB	96276,	CB962	77, CB9	6278,	CB96279	9, CB9	96280, C	B96281,
C.O.D.	BRL	10	19	21	NC	101			103			85 - 115	20
Comment:													
Additional criteria matrix spike acc	•	-											
QA/QC Batch 456249 (umhos/c CB96281, CB96282, CB96283,				96599 (C	CB9627	5, CB9	6276, C	B96277	, CB96	6278, CB	96279	), CB962	280,
Conductivity	BRL	5.00	,	332	1.50	95.9						85 - 115	20
Comment:													
Additional criteria matrix spike acc	eptance	range i	s 75-125%.										
QA/QC Batch 456196 (mg/L), CCB96282, CB96283, CB96284,			: CB96275	(CB962	275, CB	96276	, CB962	77, CB9	96278,	CB96279	9, CB9	96280, C	CB96281,
Nitrate-N	BRL	0.02		1.02	0	104			99.4			90 - 110	
Nitrite-N	BRL	0.01		0.07	0	104			99.2			90 - 110	
QA/QC Batch 456412 (mg/L), CCB96282, CB96283, CB96284,	CB962	ple No !85)		' (CB962	275, CE			77, CB9			9, CB9	96280, 0	CB96281,
Ammonia as Nitrogen	BRL	0.05		0.07	NC	98.7			98.9			90 - 110	
Nitrogen Tot Kjeldahl Comment:	BRL	0.10	2.76	3.18	14.1	105			103			85 - 115	5 20
TKN is reported as Organic Nitrog	on in the	Blank	I CS DUD	2M bac									
QA/QC Batch 456191 (mg/L), C					275 05	196276	CROSS	77 CB0	26279	CR06276	0 CB(	26280 <i>(</i>	CR96281
CB96282, CB96283, CB96284, Chlorine Residual				<0.02	275, CE NC	110	, 00302	. / /, UDS	3UZ/0,	CD30273	a, UD	3020U, (	JU3UZO I,
CHICING Nesidual	חור	Ų.UZ	. ~0.02	~U.UZ	INC	110							

## QA/QC Data

SDG I.D.: GCB96275

Phyllis/Shiller, Laboratory Director

November 20, 2018

Blk Sample Dup Dup LCS LCSD LCS MS MSD Rec RPD RPD RPD RPD Limits Limits Blank RL Result Result Parameter

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

Page 26 of 35

Tuesday, November 20, 2018

Criteria: None

Sample Criteria Exceedances Report

GCB96275 - ATC-EHDAS

Criteria

Phoenix Analyte

Acode

SampNo

State: CT

\*\*\* 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 exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

씸

Analysis Units

RL Criteria

Criteria

Result



# REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name: Phoenix Environmental Labs, Inc. Client: ATC Associates

Project Location: 204118 NEW HAVEN STORMWATER Project Number:

Laboratory Sample ID(s): CB96275-CB96285 Sampling Date(s): 11/13/2018

List RCP Methods Used (e.g., 8260, 8270, et cetera) 6010

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?	✓ Yes □ No
1A	Were the method specified preservation and holding time requirements met?	✓ Yes □ 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)	□ Yes □ No ☑ NA
2	Were all samples received by the laboratory in a condition consistent with that described on the associated Chain-of-Custody document(s)?	✓ Yes □ No
3	Were samples received at an appropriate temperature (< 6 Degrees C)?	✓ Yes □ No □ NA
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	✓ Yes □ No
5	a) Were reporting limits specified or referenced on the chain-of-custody?	☐ Yes ☑ No
	b) Were these reporting limits met?	✓ Yes 🗆 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?	☐ Yes 🗹 No
7	Are project-specific matrix spikes and laboratory duplicates included in the data set?	☐ Yes 🗹 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.

knowledge and belief a	st under the pains and penalt nd based upon my personal ir in this analytical report, such	iquiry of t	hose responsible for providing the
Authorized Signature:	Rashui nakal	Position:	Project Manager
Printed Name: Rash	mi Makol	Date:	Tuesday, November 20, 2018
Name of Laboratory	Phoenix Environmental Labs, Inc.		

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

CTDEP RCP Laboratory Analysis QA/QC Certification Form - November 2007 Laboratory Quality Assurance and Quality Control Guidance Reasonable Confidence Protocols



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## **RCP Certification Report**

November 20, 2018

SDG I.D.: GCB96275

#### **SDG Comments**

Metals Analysis:

The client requested a shorter list of elements than the 6010 RCP list. Only Boron is reported as requested on the chain of custody.

#### Wet Chemistry Analysis

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

#### Instrument:

#### BECKMAN DU720 #2 11/13/18-3 Michael Tran, Chemist 11/13/18

CB96275, CB96276, CB96277, CB96278, CB96279, CB96280, CB96281, CB96282, CB96283, CB96284, CB96285

#### BECKMAN DU720 11/13/18-2 Andreana Panzo, Chemist 11/13/18

CB96275, CB96276, CB96277, CB96278, CB96279, CB96280, CB96281, CB96282, CB96283, CB96284, CB96285

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

All mathid verification standards and blanks met criteria

#### HACH DR 5000 11/15/18-1

CB96275, CB96276, CB96277, CB96278, CB96279, CB96280, CB96281, CB96282, CB96283, CB96284, CB96285

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 456055 (CB92522)

CB96275, CB96276, CB96277, CB96278, CB96279, CB96280, CB96281, CB96282, CB96283, CB96284, CB96285

All LCS recoveries were within 85 - 115 with the following exceptions: None.

All LCSD recoveries were within 85 - 115 with the following exceptions: None.

All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

Additional: MS acceptance range 75-125%.

Additional criteria matrix spike acceptance range is 75-125%.

#### Batch 456145 (CB92776)

CB96275, CB96276, CB96277, CB96278, CB96279, CB96280, CB96281, CB96282, CB96283, CB96284, CB96285

All LCS recoveries were within 85 - 115 with the following exceptions: None.

Additional criteria matrix spike acceptance range is 75-125%.

#### Batch 456249 (CB96599)

CB96275, CB96276, CB96277, CB96278, CB96279, CB96280, CB96281, CB96282, CB96283, CB96284, CB96285

All LCS recoveries were within 85 - 115 with the following exceptions: None.

Additional criteria matrix spike acceptance range is 75-125%.

#### Batch 456259 (CB92532)

CB96275, CB96276, CB96277, CB96278, CB96279, CB96280, CB96281, CB96282, CB96283, CB96284, CB96285 All LCS recoveries were within 85 - 115 with the following exceptions; None.



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



## **RCP Certification Report**

November 20, 2018

SDG I.D.: GCB96275

#### Wet Chemistry Analysis

Additional criteria matrix spike acceptance range is 75-125%.

#### QC (Site Specific):

#### Batch 456156 (CB96275)

CB96275, CB96276, CB96277, CB96278, CB96279, CB96280, CB96281, CB96282, CB96283, CB96284, CB96285

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 456385 (CB96276)

CB96275, CB96276, CB96277, CB96278, CB96279, CB96280, CB96281, CB96282, CB96283, CB96284, CB96285

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 11/14/18 11:51

Cindy Pearce, Emily Kolominskaya, Chemist 11/14/18

CB96275, CB96276, CB96277, CB96278, CB96279, CB96280, CB96281, CB96282, CB96283, CB96284, CB96285

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 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 (Batch Specific):

#### Batch 456163 (CB91566)

CB96275, CB96276, CB96277, CB96278, CB96279, CB96280, CB96281, CB96282, CB96283, CB96284, CB96285

All LCS 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 11/13/18-1

Thomas Budz, Chemist 11/13/18

CB96275, CB96276, CB96277, CB96278, CB96279, CB96280, CB96281, CB96282, CB96283, CB96284, CB96285

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

All method verification standards and blanks met criteria.







## **RCP Certification Report**

November 20, 2018

SDG I.D.: GCB96275

#### LACHAT

#### QC (Site Specific):

#### Batch 456196 (CB96275)

CB96275, CB96276, CB96277, CB96278, CB96279, CB96280, CB96281, CB96282, CB96283, CB96284, CB96285 All LCS recoveries were within 90 - 110 with the following exceptions: None.

All MS 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 11/17/18-1

Kandi Della Bella, Chemist 11/17/18

CB96275, CB96276, CB96277, CB96278, CB96279, CB96280, CB96281, CB96282, CB96283, CB96284, CB96285

The intercalibration met all criteria including a standard rup at the reporting level.

All method verification standards and blanks met criteria.

#### QC (Batch Specific):

#### Batch 456412 (CB91937)

CB96275, CB96276, CB96277, CB96278, CB96279, CB96280, CB96281, CB96282, CB96283, CB96284, CB96285 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 1.5C with cooling initiated.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

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www.phoenixlabs.com<https://www.phoenixlabs.com>

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## LABORATORY REPORTS AND CHAIN OF CUSTODY

12/21/2018



Phone 203-245-0568 Fax 203-318-0830

Connecticut Certification PH-0535

www.eclinconline.com

## **Report of Analysis**

Name:

ATC Group Services, LLC

Sample ID#:

121966

290 Roberts St.

Sample Type:

Water

Suite 301

Sample Source:

Sampler:

New Haven Stormwater Client

East Hartford, CT 06108

Attn: Luke Whitehouse

Sample Date:

12/21/2018

Receipt Date: Report Date:

12/21/2018 12/28/2018

Sample Site:

046

Parameter	Sample Result	Units	Method	MDL	Analysis Date	Analyst
Biological						
Coliform, E. Coli	410	MPN/100mL	Colilert-18	100	12/21/2018	DB
Coliform, Total	8420	MPN/100mL	Colilert-18	100	12/21/2018	DB
Enterococcus Bacteria	1990	MPN/100mL	Enterolert	100	12/21/2018	DB
Fecal Coliform Bacteria	200	MPN/100mL	Colilert-18	100	12/21/2018	DB

DAYID BARRIS - LABORATORY DIRECTOR



Phone 203-245-0568 Fax 203-318-0830 Connecticut Certification PH-0535

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## Report of Analysis

Name:

ATC Group Services, LLC

290 Roberts St.

Suite 301

East Hartford, CT 06108

Attn: Luke Whitehouse

Sample Date:

12/21/2018

Receipt Date:

12/21/2018

Report Date:

12/28/2018

Sample Site:

047

Sample ID#:

121967

Sample Type: Sample Source:

Water New Haven Stormwater

Sampler:

Client

Parameter	Sample Result	Units	Method	MDL	Analysis Date	Analyst
Biological			***************************************			
Coliform, E. Coli	3360	MPN/100mL	Colilert-18	100	12/21/2018	DB
Coliform, Total	13540	MPN/100mL	Colilert-18	100	12/21/2018	DB
Enterococcus Bacteria	1580	MPN/100mL	Enterolert	100	12/21/2018	DB
Fecal Coliform Bacteria	1610	MPN/100mL	Colilert-18	100	12/21/2018	DB

AVID DARRIS LABORATORY DIRECTOR



Phone 203-245-0568 Fax 203-318-0830 Connecticut Certification PH-0535

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## **Report of Analysis**

Name:

ATC Group Services, LLC

290 Roberts St.

Suite 301

East Hartford, CT 06108

Attn: Luke Whitehouse

Sample Date:

12/21/2018

Receipt Date:

12/21/2018

Report Date:

12/28/2018

Sample Site:

089

Sample ID#: 121968

Sample Type:

Water

Sample Source:

New Haven Stormwater

Sampler:

Client

Parameter	Sample Result	Units	Method	MDL	Analysis Date	Analyst
Biological						
Coliform, E. Coli	9590	MPN/100mL	Colilert-18	100	12/21/2018	DB
Coliform, Total	46110	MPN/100mL	Colilert-18	100	12/21/2018	DB
Enterococcus Bacteria	5540	MPN/100mL	Enterolert	100	12/21/2018	DB
Fecal Coliform Bacteria	2980	MPN/100mL	Colilert-18	100	12/21/2018	DB

WAVID BARRIS - LABORATORY DIRECTOR



Phone 203-245-0568 Fax 203-318-0830 Connecticut Certification PH-0535 www.eclinconline.com

## Report of Analysis

Name:

ATC Group Services, LLC

290 Roberts St.

Suite 301

East Hartford, CT 06108

Attn: Luke Whitehouse

Sample Date:

12/21/2018

Receipt Date:

12/21/2018

Report Date: Sample Site:

12/28/2018 0121 Sample ID#: 121969 Sample Type: Water

Sample Source:

New Haven Stormwater

Sampler:

Client

Parameter	Sample Result	Units	Method	MDL	Analysis Date	Analyst
Biological					***************************************	
Coliform, E. Coli	520	MPN/100mL	Colilert-18	100	12/21/2018	DB
Coliform, Total	11450	MPN/100mL	Colilert-18	100	12/21/2018	DB
Enterococcus Bacteria	1580	MPN/100mL	Enterolert	100	12/21/2018	DB
Fecal Coliform Bacteria	310	MPN/100mL	Colilert-18	100	12/21/2018	DB

DAVID BARRIS - LABORATORY DIRECTOR



Phone 203-245-0568 Fax 203-318-0830

Connecticut Certification PH-0535

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## Report of Analysis

Name:

ATC Group Services, LLC

Sample ID#:

121970

290 Roberts St.

Sample Type:

Water

Suite 301

Sample Source:

New Haven Stormwater

Attn: Luke Whitehouse

East Hartford, CT 06108

Sampler:

Client

Sample Date: Receipt Date:

12/21/2018 12/21/2018

Report Date:

12/28/2018

Sample Site:

0132

Parameter	Sample Result	Units	Method	MDL	Analysis Date	Analyst
Biological						
Coliform, E. Coli	7940	MPN/100mL	Colilert-18	100	12/21/2018	DB
Coliform, Total	18600	MPN/100mL	Colilert-18	100	12/21/2018	DB
Enterococcus Bacteria	630	MPN/100mL	Enterolert	100	12/21/2018	DB
Fecal Coliform Bacteria	1100	MPN/100mL	Colilert-18	100	12/21/2018	DB

DAVID BARRIS - LABORATORY DIRECTOR



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Connecticut Certification PH-0535

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## **Report of Analysis**

Name:

ATC Group Services, LLC

Sample ID#:

121971

290 Roberts St.

Sample Type:

Water

Suite 301

Sample Source:

New Haven Stormwater

East Hartford, CT 06108 Attn: Luke Whitehouse Sampler:

Client

Sample Date:

12/21/2018

Receipt Date:

12/21/2018 12/28/2018

Report Date: Sample Site:

0138

Parameter	Sample Result	Units	Method	MDL	Analysis Date	Analyst
Biological				-	***	
Coliform, E. Coli	100	MPN/100mL	Colilert-18	100	12/21/2018	DB
Coliform, Total	77010	MPN/100mL	Colilert-18	100	12/21/2018	DB
Enterococcus Bacteria	1630	MPN/100mL	Enterolert	100	12/21/2018	DB
Fecal Coliform Bacteria	100	MPN/100mL	Colilert-18	100	12/21/2018	DB

DAVID BARRIS - LABORATORY DIRECTOR

EN VIRONMENTAL CONSULTING LABORATORIES, INC.

1005 Boston Post Road Madison, CT 06443

(203) 245-0568 Phone (203) 318-0830 Fax

Client	ATC Orono Se	Servies		d	Price			,	Analysis	sis			
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Remarks or Comments:

#### Environmental Consulting Labs, Inc. 1005 Boston Post Road Madison, CT 06443

**Invoice** 

Invoice Number: 57313

Invoice Date:

Dec 28, 2018

Page:

Voice: Fax: 203-245-0568 203-318-0830

Sold To:

ATC Group Services, LLC

290 Roberts St.

Suite 301

East Hartford, CT 06108

Ship to:

ATC Group Services

290 Roberts St.

Suite 301

East Hartford, CT 06108

Laboratory Contact			Customer PO	Payment Terms Net 30 Days		
		New	Haven Stormwater			
			Sample Number	Ship Date	Due Date	
		121966	5-971	2/28/18	1/27/19	
Quantity	Item		Description	Unit Price	Extension	
6.001	OTAL COLIFC		TOTAL COLIFORM AND ECOLI BACTERIA	75.00	450.0	
			TEST BY QUANTRAY COLI-LERT TEST			
1	NTEROCOCCI		ENTEROCOCCI BACTERIA	75.00	450.0	
6.00F	ECAL COLIFO	)RM	Fecal Coliform bacteria test by	75.00	450.0	
			Colilert			

Subtotal	1,350.00
Sales Tax	85.73
Total Invoice Amount	1,435.73
Payment Received	
TOTAL.	1,435.73

Check No: