

## **Appendix 5**

### **Draft 2017 MS4 Stormwater Annual Report**

#### **Water Testing**

#### **ACT Report Part 2**

**Sample Date**

**March 01, 2017**

**ANALYTICAL  
CONSULTING  
TECHNOLOGY, INC**

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200 Orange St, Rm 503

New Haven, CT 06510

Certified Laboratory

US EPA CT-021  
CT PH-0518  
EMail actlabs@sbcglobal.net

Report Date: 06/07/2017

ACT Number: 2017030018 - 1

Sample Type: Grab

Collected by: Client

Location/ID: 5014-S20-147

Description:

Sample Date: 03/01/2017

Sample Time: 12:15:

Date Received: 03/01/2017

Project number

Sample Matrix: Stormwater

**Laboratory Test**

<b>Laboratory Test</b>	<b>Result</b>	<b>Units</b>	<b>Method</b>	<b>Analysis Date</b>	<b>Analyst</b>
<i>Inorganic</i>					
Ammonia Nitrogen	0.57	mg/L	EPA 350.1	03/07/2017 10:30:00 AM	NS
Chemical Oxygen Demand	332	mg/L	EPA 410.4	03/10/2017 02:00:00 PM	EAG
MBAS (Surfactants)	<0.02	mg/L	SM5540 C	03/03/2017 02:30:00 PM	EAG
Nitrite/Nitrate Nitrogens	0.71	mg/L	300	03/02/2017 04:33:00 PM	RL
Nitrogen, Total Kjeldahl	2.83	mg/L	SM 4500 Norg	03/08/2017 10:30:00 AM	NS
pH	6.3	S.U.	SM 4500-H+B	03/01/2017 12:15:00 PM	OD
Phosphorus, Total	0.45	mg/L	SM 4500 -PE	03/07/2017 10:30:00 AM	NS
Specific Conductance	28.7	us	EPA 120.1	03/01/2017 12:15:00 PM	OD
Total Suspended Solids	766.5	mg/L	SM2540D	03/07/2017 10:00:00 AM	EG
Turbidity	18	NTU	EPA 180.1	03/01/2017 12:15:00 PM	OD
<i>Metals</i>					
Hardness	151.0	mg/L	EPA 200.7	03/03/2017 12:49:06 PM	TU
<i>Microbiology</i>					
E-Coli	200	col./100ml	SM9222G	03/01/2017 06:30:00 PM	EG
Enterococcus	3,800	Ent/100ml	SM 9230B	03/01/2017 07:00:00 PM	EG

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Page 2

New Haven, CT 06510

Report Date: 06/07/2017

ACT Number: 2017030018 - 1		Sample Date: 03/01/2017	Date Received: 03/01/2017		
Sample Type: Grab		Sample Time: 12:15:	Project number		
Collected by: Client		Sample Matrix: Stormwater			
Location/ID: 5014-S20-147					
Description:					
Laboratory Test	Result	Units	Method	Analysis Date	Analyst
<i>Organics</i>					
Oil and Grease	1.3	mg/L	EPA 1664	03/02/2017 04:00:00 PM	RL
<i>PPCP</i>					
1,7-Dimethylxanthine	<250	ng/L	1694	03/17/2017 04:17:00 AM	ALS
Acetaminophen	64	ng/L	1694	03/10/2017 12:55:00 AM	ALS
Atenolol	<250	ng/L	1694	03/17/2017 04:17:00 AM	ALS
Azithromycin	<250	ng/L	1694	03/17/2017 04:17:00 AM	ALS
Caffeine	980	ng/L	1694	03/10/2017 12:55:00 AM	ALS
Carbamazepine	<1.0	ng/L	1694	03/10/2017 12:55:00 AM	ALS
Continine	<250	ng/L	1694	03/22/2014 05:16:00 AM	ALS
Primidone	<250	ng/L	1694	03/17/2017 04:17:00 AM	ALS
Urobilin	<250	ng/L	1694	03/17/2017 04:17:00 AM	ALS

ACT Number: 2017030018 - 2		Sample Date: 03/01/2017	Date Received: 03/01/2017		
Sample Type: Grab		Sample Time: 12:45:	Project number		
Collected by: Client		Sample Matrix: Stormwater			
Location/ID: 5031-S21-147					
Description:					
Laboratory Test	Result	Units	Method	Analysis Date	Analyst

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Page 3

Report Date: 06/07/2017

ACT Number: 2017030018 - 2      Sample Date: 03/01/2017      Date Received: 03/01/2017  
Sample Type: Grab      Sample Time: 12:45:      Project number  
Collected by: Client      Sample Matrix: Stormwater  
Location/ID: 5031-S21-147  
Description:

Laboratory Test	Result	Units	Method	Analysis Date	Analyst
<i>Inorganic</i>					
Ammonia Nitrogen	0.27	mg/L	EPA 350.1	03/07/2017 10:30:00 AM	NS
Chemical Oxygen Demand	320	mg/L	EPA 410.4	03/10/2017 02:00:00 PM	EAG
MBAS (Surfactants)	<0.02	mg/L	SM5540 C	03/03/2017 02:30:00 PM	EAG
Nitrite/Nitrate Nitrogens	0.48	mg/L	300	03/02/2017 04:54:00 PM	RL
Nitrogen, Total Kjeldahl	1.59	mg/L	SM 4500 Norg	03/08/2017 10:30:00 AM	NS
pH	5.67	S.U.	SM 4500-H+B	03/01/2017 12:45:00 PM	OD
Phosphorus, Total	0.65	mg/L	SM 4500 -PE	03/07/2017 10:30:00 AM	NS
Specific Conductance	307	umho/cm	EPA 120.1	03/01/2017 12:45:00 PM	OD
Total Suspended Solids	944.0	mg/L	SM2540D	03/07/2017 10:00:00 AM	EG
Turbidity	>999	NTU	EPA 180.1	03/01/2017 01:50:00 PM	OD
<i>Metals</i>					
Hardness	156.2	mg/L	EPA 200.7	03/03/2017 12:49:06 PM	TU
<i>Microbiology</i>					
E-Coli	100	col./100ml	SM9222G	03/01/2017 06:30:00 PM	EG
Enterococcus	500	Ent/100ml	SM 9230B	03/01/2017 07:00:00 PM	EG

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Page 4

Report Date: 06/07/2017

ACT Number: 2017030018 - 2

Sample Type: Grab

Collected by: Client

Location/ID: 5031-S21-147

Description:

Sample Date: 03/01/2017

Sample Time: 12:45:

Date Received: 03/01/2017

Project number

Sample Matrix: Stormwater

**Laboratory Test**

Laboratory Test	Result	Units	Method	Analysis Date	Analyst
<i>Organics</i>					
Oil and Grease	2.1	mg/L	EPA 1664	03/02/2017 04:00:00 PM	RL
<i>PPCP</i>					
1,7-Dimethylxanthine	980	ng/L	1694	03/16/2017 04:19:00 AM	ALS
Acetaminophen	71	ng/L	1694	03/10/2017 01:16:00 AM	ALS
Atenolol	<500	ng/L	1694	03/16/2017 04:19:00 AM	ALS
Azithromycin	<500	ng/L	1694	03/16/2017 04:19:00 AM	ALS
Caffeine	1400	ng/L	1694	03/16/2017 04:19:00 AM	ALS
Carbamazepine	<10	ng/L	1694	03/10/2017 01:16:00 AM	ALS
Continine	<500	ng/L	1694	03/10/2017 01:16:00 AM	ALS
Primidone	<500	ng/L	1694	03/16/2017 04:19:00 AM	ALS
Urobilin	<500	ng/L	1694	03/16/2017 04:19:00 AM	ALS

ACT Number: 2017030018 - 3

Sample Type: Grab

Collected by: Client

Location/ID: 2021X12-245

Description:

Sample Date: 03/01/2017

Sample Time: 13:50:

Date Received: 03/01/2017

Project number

Sample Matrix: Stormwater

**Laboratory Test**

Laboratory Test	Result	Units	Method	Analysis Date	Analyst
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Page 5

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Report Date: 06/07/2017

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ACT Number: 2017030018 - 3      Sample Date: 03/01/2017      Date Received: 03/01/2017  
Sample Type: Grab      Sample Time: 13:50      Project number  
Collected by: Client      Sample Matrix: Stormwater  
Location/ID: 2021X12-245  
Description:

Laboratory Test	Result	Units	Method	Analysis Date	Analyst
<i>Inorganic</i>					
Ammonia Nitrogen	0.14	mg/L	EPA 350.1	03/07/2017 10:30:00 AM	NS
Chemical Oxygen Demand	656	mg/L	EPA 410.4	03/10/2017 02:00:00 PM	EAG
MBAS (Surfactants)	0.15	mg/L	SM5540 C	03/03/2017 02:30:00 PM	EAG
Nitrite/Nitrate Nitrogens	0.23	mg/L	300	03/02/2017 05:16:00 PM	RL
Nitrogen, Total Kjeldahl	1.58	mg/L	SM 4500 Norg	03/08/2017 10:30:00 AM	NS
pH	6.82	S.U.	SM 4500-H+B	03/01/2017 01:50:00 PM	OD
Phosphorus, Total	0.61	mg/L	SM 4500 -PE	03/07/2017 10:30:00 AM	NS
Specific Conductance	26	umho/cm	EPA 120.1	03/01/2017 01:50:00 PM	OD
Total Suspended Solids	1096.5	mg/L	SM2540D	03/07/2017 10:00:00 AM	EG
Turbidity	>999	NTU	EPA 180.1	03/01/2017 02:30:00 PM	OD
<i>Metals</i>					
Hardness	45.1	mg/L	EPA 200.7	03/03/2017 12:49:06 PM	TU
<i>Microbiology</i>					
E-Coli	100	col./100ml	SM9222G	03/01/2017 06:30:00 PM	EG
Enterococcus	100	Ent/100ml	SM 9230B	03/01/2017 07:00:00 PM	EG

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Page 6

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Report Date: 06/07/2017

ACT Number: 2017030018 - 3      Sample Date: 03/01/2017      Date Received: 03/01/2017  
Sample Type: Grab      Sample Time: 13:50      Project number  
Collected by: Client      Sample Matrix: Stormwater  
Location/ID: 2021X12-245  
Description:

Laboratory Test	Result	Units	Method	Analysis Date	Analyst
<i>Organics</i>					
Oil and Grease	21	mg/L	EPA 1664	03/06/2017 04:00:00 PM	RL
<i>PPCP</i>					
1,7-Dimethylxanthine	<270	ng/L	1694	03/17/2017 04:42:00 AM	ALS
Acetaminophen	13	ng/L	1694	03/10/2017 01:37:00 AM	ALS
Atenolol	<270	ng/L	1694	03/17/2017 04:42:00 AM	ALS
Azithromycin	<270	ng/L	1694	03/17/2017 04:42:00 AM	ALS
Caffeine	1500	ng/L	1694	03/10/2017 03:43:00 AM	ALS
Carbamazepine	<1.1	ng/L	1694	03/10/2017 01:37:00 AM	ALS
Continine	<270	ng/L	1694	03/22/2017 05:41:00 AM	ALS
Primidone	<270	ng/L	1694	03/17/2017 04:42:00 AM	ALS
Urobilin	<270	ng/L	1694	03/17/2017 04:42:00 AM	ALS

ACT Number: 2017030018 - 4      Sample Date: 03/01/2017      Date Received: 03/01/2017  
Sample Type: Grab      Sample Time: 14:30      Project number  
Collected by: Client      Sample Matrix: Stormwater  
Location/ID: 3104-W14-253  
Description:

Laboratory Test	Result	Units	Method	Analysis Date	Analyst
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Page 7

New Haven, CT 06510

Report Date: 06/07/2017

ACT Number: 2017030018 - 4      Sample Date: 03/01/2017      Date Received: 03/01/2017  
Sample Type: Grab      Sample Time: 14:30:      Project number  
Collected by: Client      Sample Matrix: Stormwater  
Location/ID: 3104-W14-253  
Description:

Laboratory Test	Result	Units	Method	Analysis Date	Analyst
<i>Inorganic</i>					
Ammonia Nitrogen	0.32	mg/L	EPA 350.1	03/07/2017 10:30:00 AM	NS
Chemical Oxygen Demand	589	mg/L	EPA 410.4	03/10/2017 02:00:00 PM	EAG
MBAS (Surfactants)	<0.02	mg/L	SM5540 C	03/03/2017 02:30:00 PM	EAG
Nitrite/Nitrate Nitrogens	0.77	mg/L	300	03/02/2017 06:22:00 PM	RL
Nitrogen, Total Kjeldahl	3.10	mg/L	SM 4500 Norg	03/08/2017 10:30:00 AM	NS
pH	5.43	S.U.	SM 4500-H+B	03/01/2017 02:30:00 PM	OD
Phosphorus, Total	0.70	mg/L	SM 4500 -PE	03/07/2017 10:30:00 AM	NS
Specific Conductance	277	umho/cm	EPA 120.1	03/01/2017 02:30:00 PM	OD
Total Suspended Solids	463.5	mg/L	SM2540D	03/07/2017 10:00:00 AM	EG
Turbidity	>999	NTU	EPA 180.1	03/01/2017 01:50:00 PM	OD
<i>Metals</i>					
Hardness	31.2	mg/L	EPA 200.7	03/03/2017 12:49:06 PM	TU
<i>Microbiology</i>					
E-Coli	1200	col./100ml	SM9222G	03/01/2017 06:30:00 PM	EG
Enterococcus	5,600	Ent/100ml	SM 9230B	03/01/2017 07:00:00 PM	EG

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Page 8

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Report Date: 06/07/2017

ACT Number: 2017030018 - 4      Sample Date: 03/01/2017      Date Received: 03/01/2017  
Sample Type: Grab      Sample Time: 14:30:      Project number  
Collected by: Client      Sample Matrix: Stormwater  
Location/ID: 3104-W14-253  
Description:

Laboratory Test	Result	Units	Method	Analysis Date	Analyst
<i>Organics</i>					
Oil and Grease	9.4	mg/L	EPA 1664	03/06/2017 04:00:00 PM	RL
<i>PPCP</i>					
1,7-Dimethylxanthine	<280	ng/L	1694	03/16/2017 03:41:00 AM	ALS
Acetaminophen	72	ng/L	1694	03/10/2017 01:58:00 AM	ALS
Atenolol	<280	ng/L	1694	03/16/2017 03:41:00 AM	ALS
Azithromycin	<280	ng/L	1694	03/16/2017 03:41:00 AM	ALS
Caffeine	2300	ng/L	1694	03/10/2017 01:58:00 AM	ALS
Carbamazepine	<11	ng/L	1694	03/10/2017 01:58:00 AM	ALS
Continine	610	ng/L	1694	03/16/2017 03:41:00 AM	ALS
Primidone	<280	ng/L	1694	03/16/2017 03:41:00 AM	ALS
Urobilin	<280	ng/L	1694	03/16/2017 03:41:00 AM	ALS

ACT Number: 2017030018 - 5      Sample Date: 03/01/2017      Date Received: 03/01/2017  
Sample Type: Grab      Sample Time: 15:30:      Project number  
Collected by: Client      Sample Matrix: Stormwater  
Location/ID: 2149-W13-245  
Description:

Laboratory Test	Result	Units	Method	Analysis Date	Analyst
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Page 9

**Report Date:** 06/07/2017

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ACT Number: 2017030018 - 5      Sample Date: 03/01/2017      Date Received: 03/01/2017  
Sample Type: Grab      Sample Time: 15:30      Project number  
Collected by: Client      Sample Matrix: Stormwater  
Location/ID: 2149-W13-245  
Description:

Laboratory Test	Result	Units	Method	Analysis Date	Analyst
<i>Inorganic</i>					
Ammonia Nitrogen	0.18	mg/L	EPA 350.1	03/07/2017 10:30:00 AM	NS
Chemical Oxygen Demand	218	mg/L	EPA 410.4	03/10/2017 02:00:00 PM	EAG
MBAS (Surfactants)	0.32	mg/L	SM5540 C	03/03/2017 02:30:00 PM	EAG
Nitrite/Nitrate Nitrogens	0.66	mg/L	300	03/02/2017 06:44:00 PM	RL
Nitrogen, Total Kjeldahl	2.40	mg/L	SM 4500 Norg	03/08/2017 10:30:00 AM	NS
pH	6.52	S.U.	SM 4500-H+B	03/01/2017 03:30:00 PM	OD
Phosphorus, Total	0.37	mg/L	SM 4500 -PE	03/07/2017 10:30:00 AM	NS
Specific Conductance	328	umho/cm	EPA 120.1	03/01/2017 03:30:00 PM	OD
Total Suspended Solids	442.0	mg/L	SM2540D	03/07/2017 10:00:00 AM	EG
Turbidity	>999	NTU	EPA 180.1	03/01/2017 03:30:00 PM	OD
<i>Metals</i>					
Hardness	68.4	mg/L	EPA 200.7	03/03/2017 12:49:06 PM	TU
<i>Microbiology</i>					
E-Coli	1000	col./100ml	SM9222G	03/01/2017 06:30:00 PM	EG
Enterococcus	4,400	Ent/100ml	SM 9230B	03/01/2017 07:00:00 PM	EG

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Page 10

New Haven, CT 06510

Report Date: 06/07/2017

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ACT Number: 2017030018 - 5      Sample Date: 03/01/2017      Date Received: 03/01/2017  
Sample Type: Grab      Sample Time: 15:30:      Project number  
Collected by: Client      Sample Matrix: Stormwater  
Location/ID: 2149-W13-245  
Description:

Laboratory Test	Result	Units	Method	Analysis Date	Analyst
<i>Organics</i>					
Oil and Grease	11	mg/L	EPA 1664	03/06/2017 04:00:00 PM	RL
<i>PPCP</i>					
1,7-Dimethylxanthine	270	ng/L	1694	03/16/2017 03:54:00 AM	ALS
Acetaminophen	110	ng/L	1694	03/10/2017 02:19:00 AM	ALS
Atenolol	<270	ng/L	1694	03/16/2017 03:54:00 AM	ALS
Azithromycin	<270	ng/L	1694	03/16/2017 03:54:00 AM	ALS
Caffeine	3700	ng/L	1694	03/10/2017 02:19:00 AM	ALS
Carbamazepine	<11	ng/L	1694	03/10/2017 02:19:00 AM	ALS
Continine	450	ng/L	1694	03/16/2017 03:54:00 AM	ALS
Primidone	<270	ng/L	1694	03/16/2017 03:54:00 AM	ALS
Urobilin	<270	ng/L	1694	03/16/2017 03:54:00 AM	ALS

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ACT Number: 2017030018 - 6      Sample Date: 03/01/2017      Date Received: 03/01/2017  
Sample Type: Grab      Sample Time: 16:00:      Project number  
Collected by: Client      Sample Matrix: Stormwater  
Location/ID: 3101S-W14-253  
Description:

Laboratory Test	Result	Units	Method	Analysis Date	Analyst
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Page 11

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Report Date: 06/07/2017

ACT Number: 2017030018 - 6      Sample Date: 03/01/2017      Date Received: 03/01/2017  
Sample Type: Grab      Sample Time: 16:00:      Project number  
Collected by: Client      Sample Matrix: Stormwater  
Location/ID: 3101S-W14-253  
Description:

Laboratory Test	Result	Units	Method	Analysis Date	Analyst
<i>Inorganic</i>					
Ammonia Nitrogen	0.19	mg/L	EPA 350.1	03/07/2017 10:30:00 AM	NS
Chemical Oxygen Demand	190	mg/L	EPA 410.4	03/10/2017 02:00:00 PM	EAG
MBAS (Surfactants)	0.27	mg/L	SM5540 C	03/03/2017 02:30:00 PM	EAG
Nitrite/Nitrate Nitrogens	0.56	mg/L	300	03/02/2017 07:06:00 PM	RL
Nitrogen, Total Kjeldahl	2.07	mg/L	SM 4500 Norg	03/08/2017 10:30:00 AM	NS
pH	7.14	S.U.	SM 4500-H+B	03/01/2017 04:00:00 PM	OD
Phosphorus, Total	0.34	mg/L	SM 4500 -PE	03/07/2017 10:30:00 AM	NS
Specific Conductance	251	umho/cm	EPA 120.1	03/01/2017 12:00:00 AM	OD
Total Suspended Solids	899.0	mg/L	SM2540D	03/08/2017 10:00:00 AM	EG
Turbidity	>999	NTU	EPA 180.1	03/01/2017 04:00:00 PM	OD
<i>Metals</i>					
Hardness	31.3	mg/L	EPA 200.7	03/03/2017 12:49:06 PM	TU
<i>Microbiology</i>					
E-Coli	100	col./100ml	SM9222G	03/01/2017 06:30:00 PM	EG
Enterococcus	2,200	Ent/100ml	SM 9230B	03/01/2017 07:00:00 PM	EG

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Page 12

New Haven, CT 06510

Report Date: 06/07/2017

ACT Number: 2017030018 - 6      Sample Date: 03/01/2017      Date Received: 03/01/2017  
Sample Type: Grab      Sample Time: 16:00:      Project number  
Collected by: Client      Sample Matrix: Stormwater  
Location/ID: 3101S-W14-253  
Description:

Laboratory Test	Result	Units	Method	Analysis Date	Analyst
<i>Organics</i>					
Oil and Grease	12	mg/L	EPA 1664	03/06/2017 04:00:00 PM	RL
<i>PPCP</i>					
1,7-Dimethylxanthine	<260	ng/L	1694	03/17/2017 05:20:00 AM	ALS
Acetaminophen	<53	ng/L	1694	03/10/2017 04:45:00 AM	ALS
Atenolol	<260	ng/L	1694	03/17/2017 05:20:00 AM	ALS
Azithromycin	<260	ng/L	1694	03/17/2017 05:20:00 AM	ALS
Caffeine	1700	ng/L	1694	03/10/2017 04:45:00 AM	ALS
Carbamazepine	<11	ng/L	1694	03/10/2017 04:45:00 AM	ALS
Continine	<260	ng/L	1694	03/22/2017 06:19:00 AM	ALS
Primidone	<260	ng/L	1694	03/17/2017 05:20:00 AM	ALS
Urobilin	<260	ng/L	1694	03/17/2017 05:20:00 AM	ALS

**A**NALYTICAL  
**C**ONSULTING  
**T**ECHNOLOGY, INC

168 Railroad Hill St., Waterbury, CT 06708 • (203) 757-3960 • Fax (203) 759-2155  
www.actlabs.biz

For Analytical Consulting Technology, Inc.

  
\_\_\_\_\_  
Laboratory Director

2017030018



**General Permit for the Discharge of Stormwater from Small Municipal  
Separate Storm Sewer Systems**  
**Stormwater Monitoring Report Form**

Please send completed form to: **STORMWATER GROUP  
BUREAU OF MATERIALS MANAGEMENT & COMPLIANCE ASSURANCE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127**

**PERMITTEE INFORMATION**

Town: <u>New Haven</u>	
Mailing Address: <u>200 Orange Street, Room 503, New Haven, Ct. 06510</u>	
Contact Person: <u>Ian Juden PE</u>	Title: <u>Project Manager</u>
Phone: <u>203 946-8094</u>	Permit Registration #GSM: <u>000030</u>

**SAMPLING INFORMATION**

Discharge Location (Lat/Long or other description): <u>Kendal &amp; Fulton</u>	
Please check the appropriate area description: <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential	
Receiving Water (name, basin): <u>Catch Basin 5014 Outlet #147</u>	
Time of Start of Discharge: <u>03/01/2017 12:15</u>	
Date/Time Collected: <u>03/01/2017 12:15</u>	Water Temperature: <u>12.7°C</u>
Person Collecting Sample: <u>O.Diedrich</u>	
Storm Magnitude (inches): <u>0.22"</u>	Storm Duration (hours): <u>&gt;12 HRS</u>
Date of Previous Storm Event: <u>02/25/2017</u>	

**MONITORING RESULTS**

Parameter	Method	Results (units)	Laboratory
Sample pH	SM4500 H+B	6.3 s.u	ACT
Rain pH	SM4500 H+B	6.3 s.u	ACT
Hardness	EPA 200.7	151.0 mg/L	ACT
Conductivity	EPA 120.1	28.7 umhos	ACT
Oil & Grease	EPA 1664	1.3 mg/L	ACT
COD	EPA 410.4	332 mg/L	ACT
Turbidity	EPA 180.1	18 NTU	ACT
TSS	SM2450D	766.5 mg/L	ACT
TP	SM 4500 PE	0.45 mg/L	ACT
Ammonia	EPA 350.1	0.57 mg/L	ACT
TKN	SM 4500 Norg	2.83 mg/L	ACT
NO <sub>3</sub> +NO <sub>2</sub>	EPA 300	0.71 mg/L	ACT
E. coli	SM9222G	200 col./100ml	ACT

**STATEMENT OF ACKNOWLEDGMENT**

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: Giovanni Zinn, PE City Engineer  
(Print Name)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



New Haven Special MH4

Location:

Latitude 41° 17' 32"  
 Long 72° 53' 52.6"  
 Kendal & Fulton

Order Number

2017030018-1

Catch Basin: 5014 Outlet No. 147

Quarter:  1<sup>st</sup>  2<sup>nd</sup>  3<sup>rd</sup>  4<sup>th</sup> Year: 2017

Date/Time Collected: 3/1/2017 1215

Date/Time Examined: 3/2/2017 1700

Rainfall Amount: 1.25"

Qualifying Storm?  Yes  No

Runoff Source:  Rainfall  Snowmelt

Contact Person: Ian Juden

Examiner (print): Oliver Diedrich

Examiner (sign): *Oliver Diedrich*

PARAMETER	OBSERVATION	CHARACTERISTICS
Color	Does the storm water appear to be colored? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Describe:
Odor	Does the sample have an odor? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Describe:
Clarity	Is the storm water clear or transparent? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Which best describes the clarity? <b>CLEAR</b> MILKY CLOUDY
Floating Solids	Is something floating on the surface of the sample? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Describe: Debris/leaf matter
Settled Solids	Is something settled on the bottom of the sample? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Describe: Debris
Suspended Solids	Is something suspended in the sample's water column? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Describe:
Foam	Is there foam or material forming on the top of the sample surface? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Describe:
Oil Sheen	Can you see a rainbow effect or sheen on the surface? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Which best describes the sheen? Rainbow Sheen Floating oil globules Describe:
<input type="checkbox"/> Ph 6.3	12.7 C <input type="checkbox"/> Temp	28.7 <sub>us</sub> <input type="checkbox"/> Conductivity
	Turbidity 18 ntu	



# General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

## Stormwater Monitoring Report Form

Please send completed form to: **STORMWATER GROUP  
BUREAU OF MATERIALS MANAGEMENT & COMPLIANCE ASSURANCE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127**

### PERMITTEE INFORMATION

Town: <u>New Haven</u>	
Mailing Address: <u>200 Orange Street, Room 503, New Haven. Ct. 06510</u>	
Contact Person: <u>Ian Juden PE</u>	Title: <u>Project Manager</u>
Phone: <u>203 946-8094</u>	Permit Registration #GSM: <u>000030</u>

### SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>Alabama &amp; Fulton</u>	
Please check the appropriate area description: <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential	
Receiving Water (name, basin): <u>Catch Basin 5031 Outlet #147</u>	
Time of Start of Discharge: <u>03/01/2017 12:15</u>	
Date/Time Collected: <u>03/01/2017 12:15</u>	Water Temperature: <u>12.5°c</u>
Person Collecting Sample: <u>O.Diedrich</u>	
Storm Magnitude (inches): <u>0.22"</u>	Storm Duration (hours): <u>&gt;12 HRS</u>
Date of Previous Storm Event: <u>02/25/2017</u>	

### MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM4500 H+B	5.67 s.u	ACT
Rain pH	SM4500 H+B	5.67 s.u	ACT
Hardness	EPA 200.7	156.2 mg/L	ACT
Conductivity	EPA 120.1	307 umhos	ACT
Oil & Grease	EPA 1664	2.1 mg/L	ACT
COD	EPA 410.4	320 mg/L	ACT
Turbidity	EPA 180.1	>999 NTU	ACT
TSS	SM2450D	944.0 mg/L	ACT
TP	SM 4500 PE	0.65 mg/L	ACT
Ammonia	EPA 350.1	0.27 mg/L	ACT
TKN	SM 4500 Norg	1.59 mg/L	ACT
NO <sub>3</sub> +NO <sub>2</sub>	EPA 300	0.48 mg/L	ACT
E. coli	SM9222G	100 col./100ml	ACT

### STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>Giovanni Zinn, PE</u>	<u>City Engineer</u>
(Print Name)	
Signature: _____	Date: _____

New Haven Special MH4

Location:

Latitude 41°17'26.7"  
 Long 72° 54'03"  
 Alabama & Fulton

Order Number 2017030018-2

Catch Basin: 5031 Outlet No. 147  
 Date/Time Collected: 3/1/2017 1245  
 Rainfall Amount: 1.5"  
 Runoff Source: Rainfall Snowmelt

Quarter: 1<sup>st</sup> 2<sup>nd</sup> 3<sup>rd</sup> 4<sup>th</sup> Year: 2017  
 Date/Time Examined: 03/2/2017 730  
 Qualifying Storm? Yes No  
 Contact Person: Ian Juden

Examiner (print): Oliver Diedrich

Examiner (sign): *Oliver Diedrich*

PARAMETER	OBSERVATION	CHARACTERISTICS
Color	Does the storm water appear to be colored? <u>YES</u> NO	Describe: Brown
Odor	Does the sample have an odor? YES <u>NO</u>	Describe:
Clarity	Is the storm water clear or transparent? YES <u>NO</u>	Which best describes the clarity? CLEAR MILKY <u>CLOUDY</u>
Floating Solids	Is something floating on the surface of the sample? YES <u>NO</u>	Describe:
Settled Solids	Is something settled on the bottom of the sample? <u>YES</u> NO	Describe: Debris
Suspended Solids	Is something suspended in the sample's water column? YES <u>NO</u>	Describe:
Foam	Is there foam or material forming on the top of the sample surface? YES <u>NO</u>	Describe:
Oil Sheen	Can you see a rainbow effect or sheen on the surface? YES <u>NO</u>	Which best describes the sheen? Rainbow Sheen Floating oil globules Describe:
<u>Ph</u> 5.67	12.5 C <u>Temp</u>	307 <sub>us</sub> <u>Conductivity</u>
	Turbidity >999 ntu	



**General Permit for the Discharge of Stormwater from Small Municipal  
Separate Storm Sewer Systems**

**Stormwater Monitoring Report Form**

Please send completed form to: **STORMWATER GROUP  
BUREAU OF MATERIALS MANAGEMENT & COMPLIANCE ASSURANCE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127**

**PERMITTEE INFORMATION**

Town: <u>New Haven</u>	
Mailing Address: <u>200 Orange Street, Room 503, New Haven. Ct. 06510</u>	
Contact Person: <u>Ian Juden PE</u>	Title: <u>Project Manager</u>
Phone: <u>203 946-8094</u>	Permit Registration # <u>GSM: 000030</u>

**SAMPLING INFORMATION**

Discharge Location (Lat/Long or other description): <u>Essex St (Fulton Blvd. Easton)</u>	
Please check the appropriate area description: <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential	
Receiving Water (name, basin): <u>Catch Basin 2120 Outlet #245</u>	
Time of Start of Discharge: <u>03/01/2017 13:50</u>	
Date/Time Collected: <u>03/01/2017 13:50</u>	Water Temperature: <u>11.4°C</u>
Person Collecting Sample: <u>O. Diedrich</u>	
Storm Magnitude (inches): <u>0.22"</u>	Storm Duration (hours): <u>&gt;12 HRS</u>
Date of Previous Storm Event: <u>02/25/2017</u>	

**MONITORING RESULTS**

Parameter	Method	Results (units)	Laboratory
Sample pH	SM4500 H+B	6.82 s.u	ACT
Rain pH	SM4500 H+B	6.82 s.u	ACT
Hardness	EPA 200.7	45.1 mg/L	ACT
Conductivity	EPA 120.1	26 umhos	ACT
Oil & Grease	EPA 1664	21 mg/L	ACT
COD	EPA 410.4	656 mg/L	ACT
Turbidity	EPA 180.1	>999 NTU	ACT
TSS	SM2450D	1096.5 mg/L	ACT
TP	SM 4500 PE	0.61 mg/L	ACT
Ammonia	EPA 350.1	0.14 mg/L	ACT
TKN	SM 4500 Norg	1.58 mg/L	ACT
NO <sub>3</sub> +NO <sub>2</sub>	EPA 300	0.23 mg/L	ACT
E. coli	SM9222G	100 col./100ml	ACT

**STATEMENT OF ACKNOWLEDGMENT**

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>Giovanni Zinn, PE</u> City Engineer	
(Print Name)	
Signature: _____	Date: _____

New Haven Special MH4

Location: Latitude **41° 19' 10.7"**  
 Long **72° 52' 19.5"**  
 Essex St. (Foxon Blvd. Easton)

Order Number **2017030018-3**

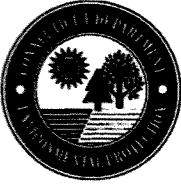
Catch Basin: 2120 Outlet No. 245  
 Date/Time Collected: 3/1/2017 1350  
 Rainfall Amount: 1.5"  
 Runoff Source: **Rainfall** Snowmelt

Quarter:  1<sup>st</sup>  2<sup>nd</sup>  3<sup>rd</sup>  4<sup>th</sup> Year: 2017  
 Date/Time Examined: 03/2/2017 730  
 Qualifying Storm?  Yes  No  
 Contact Person: Ian Juden

Examiner (print): Oliver Diedrich

Examiner (sign): *Oliver Diedrich*

PARAMETER	OBSERVATION	CHARACTERISTICS
Color	Does the storm water appear to be colored? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Describe: Brown
Odor	Does the sample have an odor? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Describe:
Clarity	Is the storm water clear or transparent? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Which best describes the clarity? CLEAR MILKY <b>CLOUDY</b>
Floating Solids	Is something floating on the surface of the sample? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Describe:
Settled Solids	Is something settled on the bottom of the sample? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Describe: Debris
Suspended Solids	Is something suspended in the sample's water column? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Describe:
Foam	Is there foam or material forming on the top of the sample surface? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Describe:
Oil Sheen	Can you see a rainbow effect or sheen on the surface? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Which best describes the sheen? Rainbow Sheen Floating oil globules Describe:
<b>Ph</b> 6.82	11.4 C <b>Temp</b>	26 <sub>us</sub> <b>Conductivity</b>
	Turbidity >999 ntu	



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DEPARTMENT OF ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127**

**PERMITTEE INFORMATION**

Town: <u>New Haven</u>	
Mailing Address: <u>200 Orange Street, Room 503, New Haven, Ct. 06510</u>	
Contact Person: <u>Ian Juden PE</u>	Title: <u>Project Manager</u>
Phone: <u>203 946-8094</u>	Permit Registration #GSM: <u>000030</u>

**SAMPLING INFORMATION**

Discharge Location (Lat/Long or other description): <u>Hemingway Avenue</u>	
Please check the appropriate area description: <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential	
Receiving Water (name, basin): <u>Catch Basin 3104 Outlet 253</u>	
Time of Start of Discharge: <u>03/01/2017 14:30</u>	
Date/Time Collected: <u>03/01/2017 14:30</u>	Water Temperature: <u>    </u> °C
Person Collecting Sample: <u>O. Diedrich</u>	
Storm Magnitude (inches): <u>0.22"</u>	Storm Duration (hours): <u>&gt;12 HRS</u>
Date of Previous Storm Event: <u>02/25/2017</u>	

**MONITORING RESULTS**

Parameter	Method	Results (units)	Laboratory
Sample pH	SM4500 H+B	5.43 s.u	ACT
Rain pH	SM4500 H+B	5.43 s.u	ACT
Hardness	EPA 200.7	31.2 mg/L	ACT
Conductivity	EPA 120.1	277 umhos	ACT
Oil & Grease	EPA 1664	9.4 mg/L	ACT
COD	EPA 410.4	9.4 mg/L	ACT
Turbidity	EPA 180.1	>999 NTU	ACT
TSS	SM2450D	463.5 mg/L	ACT
TP	SM 4500 PE	0.70 mg/L	ACT
Ammonia	EPA 350.1	0.32 mg/L	ACT
TKN	SM 4500 Norg	3.10 mg/L	ACT
NO <sub>3</sub> +NO <sub>2</sub>	EPA 300	<0.02 mg/L	ACT
E. coli	SM9222G	1200 col./100ml	ACT

**STATEMENT OF ACKNOWLEDGMENT**

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>Giovanni Zinn, PE</u>	<u>City Engineer</u>
(Print Name)	
Signature: _____	Date: _____

New Haven Special MH4

Location:

Latitude 41° 18' 51.6"  
 Long 72° 52' 42.6"  
 Hemingway Ave.

Order Number

2017030018-4

Catch Basin: 3104 Outlet No. 253

Quarter:  1<sup>st</sup>  2<sup>nd</sup>  3<sup>rd</sup>  4<sup>th</sup> Year: 2017

Date/Time Collected: 3/1/2017 1430

Date/Time Examined: 03/2/2017 730

Rainfall Amount: 1.5"

Qualifying Storm?  Yes  No

Runoff Source:  Rainfall  Snowmelt

Contact Person: Ian Juden

Examiner (print): Oliver Diedrich

Examiner (sign):



PARAMETER	OBSERVATION	CHARACTERISTICS
Color	Does the storm water appear to be colored? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Describe: Brown
Odor	Does the sample have an odor? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Describe:
Clarity	Is the storm water clear or transparent? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Which best describes the clarity? CLEAR MILKY <b>CLOUDY</b>
Floating Solids	Is something floating on the surface of the sample? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Describe: Leaf material
Settled Solids	Is something settled on the bottom of the sample? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Describe: Debris
Suspended Solids	Is something suspended in the sample's water column? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Describe:
Foam	Is there foam or material forming on the top of the sample surface? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Describe:
Oil Sheen	Can you see a rainbow effect or sheen on the surface? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Which best describes the sheen? Rainbow Sheen Floating oil globules Describe:
<input type="checkbox"/> Ph 5.43	14.2 C <input type="checkbox"/> Temp Turbidity >999 ntu	277 <sub>us</sub> <input type="checkbox"/> Conductivity



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DEPARTMENT OF ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127

**PERMITTEE INFORMATION**

Town: New Haven  
 Mailing Address: 200 Orange Street, Room 503, New Haven, Ct. 06510  
 Contact Person: Ian Juden PE Title: Project Manager  
 Phone: 203 946-8094 Permit Registration #GSM: 000030

**SAMPLING INFORMATION**

Discharge Location (Lat/Long or other description): 1043 Quinnipiac  
 Please check the appropriate area description:  Industrial  Commercial  Residential  
 Receiving Water (name, basin): Catch Basin 2149 Outlet #245  
 Time of Start of Discharge: 03/01/2017 15:30  
 Date/Time Collected: 03/01/2017 15:30 Water Temperature: 12.9°c  
 Person Collecting Sample: O.Diedrich  
 Storm Magnitude (inches): 0.22" Storm Duration (hours): >12 HRS  
 Date of Previous Storm Event: 02/25/2017

**MONITORING RESULTS**

Parameter	Method	Results (units)	Laboratory
Sample pH	SM4500 H+B	6.52 s.u	ACT
Rain pH	SM4500 H+B	6.52 s.u	ACT
Hardness	EPA 200.7	68.4 mg/L	ACT
Conductivity	EPA 120.1	328 umhos	ACT
Oil & Grease	EPA 1664	11 mg/L	ACT
COD	EPA 410.4	218 mg/L	ACT
Turbidity	EPA 180.1	>999 NTU	ACT
TSS	SM2450D	442.0 mg/L	ACT
TP	SM 4500 PE	0.37 mg/L	ACT
Ammonia	EPA 350.1	0.18 mg/L	ACT
TKN	SM 4500 Norg	2.40 mg/L	ACT
NO <sub>3</sub> +NO <sub>2</sub>	EPA 300	0.66 mg/L	ACT
E. coli	SM9222G	1000 col./100ml	ACT

**STATEMENT OF ACKNOWLEDGMENT**

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: Giovanni Zinn, PE City Engineer  
 (Print Name)  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_



New Haven Special MH4

Location:

Latitude 41° 19' 2.9"  
 Long 72° 52' 39.6"  
 1043 Quinnipiac

Order Number

2017030018-5

Catch Basin: 2149 Outlet No. 245

Quarter:  1<sup>st</sup>  2<sup>nd</sup>  3<sup>rd</sup>  4<sup>th</sup> Year: 2017

Date/Time Collected: 3/1/2017 1530

Date/Time Examined: 03/2/2017 730

Rainfall Amount: 1.5"

Qualifying Storm?  Yes  No

Runoff Source:  Rainfall  Snowmelt

Contact Person: Ian Juden

Examiner (print): Oliver Diedrich

Examiner (sign):



PARAMETER	OBSERVATION	CHARACTERISTICS
Color	Does the storm water appear to be colored? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Describe: Brown
Odor	Does the sample have an odor? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Describe:
Clarity	Is the storm water clear or transparent? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Which best describes the clarity? Semi-transparent
Floating Solids	Is something floating on the surface of the sample? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Describe:
Settled Solids	Is something settled on the bottom of the sample? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Describe: Debris
Suspended Solids	Is something suspended in the sample's water column? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Describe:
Foam	Is there foam or material forming on the top of the sample surface? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Describe:
Oil Sheen	Can you see a rainbow effect or sheen on the surface? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Which best describes the sheen? Rainbow Sheen      Floating oil globules Describe:
<input type="checkbox"/> Ph      6.52	12.9 C <input type="checkbox"/> Temp	328 <sub>us</sub> <input type="checkbox"/> Conductivity
	Turbidity      >999 ntu	



# General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

## Stormwater Monitoring Report Form

Please send completed form to: **STORMWATER GROUP**  
**BUREAU OF MATERIALS MANAGEMENT & COMPLIANCE ASSURANCE**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**79 ELM STREET**  
**HARTFORD, CT 06106-5127**

### PERMITTEE INFORMATION

Town: <u>New Haven</u>	
Mailing Address: <u>200 Orange Street, Room 503, New Haven. Ct. 06510</u>	
Contact Person: <u>Ian Juden PE</u>	Title: <u>Project Manager</u>
Phone: <u>203 946-8094</u>	Permit Registration #GSM: <u>000030</u>

### SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>1<sup>st</sup> Ave.</u>	
Please check the appropriate area description: <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential	
Receiving Water (name, basin): <u>Catch Basin 3101A Outlet #253</u>	
Time of Start of Discharge: <u>03/01/2017 16:00</u>	
Date/Time Collected: <u>03/01/2017 16:00</u>	Water Temperature: <u>12.2°C</u>
Person Collecting Sample: <u>O. Diedrich</u>	
Storm Magnitude (inches): <u>0.22"</u>	Storm Duration (hours): <u>&gt;12 HRS</u>
Date of Previous Storm Event: <u>02/25/2017</u>	

### MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM4500 H+B	7.14 s.u	ACT
Rain pH	SM4500 H+B	7.14 s.u	ACT
Hardness	EPA 200.7	31.3 mg/L	ACT
Conductivity	EPA 120.1	251 umhos	ACT
Oil & Grease	EPA 1664	12 mg/L	ACT
COD	EPA 410.4	190 mg/L	ACT
Turbidity	EPA 180.1	>999 NTU	ACT
TSS	SM2450D	899.0 mg/L	ACT
TP	SM 4500 PE	0.34 mg/L	ACT
Ammonia	EPA 350.1	0.19 mg/L	ACT
TKN	SM 4500 Norg	2.07 mg/L	ACT
NO <sub>3</sub> +NO <sub>2</sub>	EPA 300	0.56 mg/L	ACT
E. coli	SM9222G	100 col./100ml	ACT

### STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: Giovanni Zinn, PE City Engineer  
(Print Name)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

New Haven Special MH4

Location:

Latitude 41° 18' 47.6"  
 Long 72° 52' 39.3"  
 1<sup>st</sup>. Ave.

Order Number

2017030018-6

Catch Basin: 3101A Outlet No. 253

Quarter:  1<sup>st</sup>  2<sup>nd</sup> 3<sup>rd</sup> 4<sup>th</sup> Year: 2017

Date/Time Collected: 3/1/2017 1600

Date/Time Examined: 03/2/2017 730

Rainfall Amount: 1.5"

Qualifying Storm?  Yes No

Runoff Source:  Rainfall  Snowmelt

Contact Person: Ian Juden

Examiner (print): Oliver Diedrich

Examiner (sign):



PARAMETER	OBSERVATION	CHARACTERISTICS
Color	Does the storm water appear to be colored? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Describe: Brown
Odor	Does the sample have an odor? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Describe:
Clarity	Is the storm water clear or transparent? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Which best describes the clarity? Cloudy
Floating Solids	Is something floating on the surface of the sample? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Describe:
Settled Solids	Is something settled on the bottom of the sample? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Describe: Debris
Suspended Solids	Is something suspended in the sample's water column? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Describe:
Foam	Is there foam or material forming on the top of the sample surface? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Describe:
Oil Sheen	Can you see a rainbow effect or sheen on the surface? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Which best describes the sheen? Rainbow Sheen Floating oil globules
<input type="checkbox"/> Ph 7.14	12.2 C <input type="checkbox"/> Temp	251 <sub>us</sub> <input type="checkbox"/> Conductivity
	Turbidity <input type="checkbox"/> >999 ntu	

2017030218-1/4

Analytical Consulting Technology, Inc.  
168 Railroad Hill Street, Waterbury, CT 06708 (203)757-3960

MMW SS DW GW MAT

Client Name: NEW HAVEN  
Client Contact: BARB SUDEN  
Account Number:

Client Phone: \_\_\_\_\_  
Client Address: \_\_\_\_\_  
Purchase Order #: \_\_\_\_\_

Sample Number	Location	Number	Container Preservative	Sample Matrix	Date of Sample	Sample Time	Composites or Grab	Analysis Required	Test Group
1	5014 520 147	8	H2SO4	STAN 8/1/17	1245				
2	5021 521 147		HNO3		1245				
3	2021 K12 245				1350				
4	3104 W14 253				1430				
5	2149 W13 245				1530				
6	3101A W14 253				1600				
<p>Note: It is the client's responsibility to verify all information on this chain of custody.</p> <p>Containers: Non Preserve 1000=10NP, 500=50NP, 250=25NP, 125=12NP, Nitric Acid 1000=10NA, 500=50NA, 250=25NA, 125=12NA  Sulfuric Acid 500=50SH, 250=25SH, 125=12SH Sulfuric(Plastic) 1000=10SP, 500=50SP, 250=25SP  Sulfuric Glass 100SG, Baked Glass 1000BG, Sterile Cup = S, Vials = 40ml = VOA, Phenols 1000=P</p>									
<p>Sampler Signature: <u>MAT DIEDERICH</u> Time: <u>12:00</u> Date: <u>3/1</u> Relinquished By: <u>[Signature]</u> Accepted By: _____ Date: _____ Time: _____</p> <p>Log In Custodian: _____ Cooler Temp: _____ Date/Time: <u>12:00</u></p> <p>Log Out Custodian: _____ Cooler Temp: _____ Date/Time: <u>12:00</u></p> <p>H2SO4 pH &lt; 2 ACT Courier  NAOH pH &gt; 11 Fed-Ex  HNO3 pH &lt; 2 UPS</p>									



ALS Environmental  
ALS Group USA, Corp  
1317 South 13th Avenue  
Kelso, WA 98626  
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F : +1 360 636 1068  
[www.alsglobal.com](http://www.alsglobal.com)

April 10, 2017

**Analytical Report for Service Request No: K1702137**

Ms. Jean Noga  
Analytical Consulting Technology, Inc (ACT Labs)  
168 Railroad Hill St  
Waterbury, CT 06708

**RE: 2017030018**

Dear Ms.Noga,

Enclosed are the results of the sample(s) submitted to our laboratory March 03, 2017  
For your reference, these analyses have been assigned our service request number **K1702137**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at [www.alsglobal.com](http://www.alsglobal.com). All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3356. You may also contact me via email at [Kurt.Clarkson@alsglobal.com](mailto:Kurt.Clarkson@alsglobal.com).

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Kurt Clarkson  
Client Services  
Manager



ALS Environmental  
ALS Group USA, Corp  
1317 South 13th Avenue  
Kelso, WA 98626  
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[www.alsglobal.com](http://www.alsglobal.com)

## Table of Contents

Acronyms  
Qualifiers  
State Certifications, Accreditations, And Licenses  
Case Narrative  
Chain of Custody  
Steroids and Endocrine Disrupting Compounds

RIGHT SOLUTIONS RIGHT PARTNER

## Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

### Inorganic Data Qualifiers

- \* The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.  
*DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

### Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.  
*DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
  - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

### Organic Data Qualifiers

- \* The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.  
*DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
  - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

### Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.



**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso  
State Certifications, Accreditations, and Licenses**

<b>Agency</b>	<b>Web Site</b>	<b>Number</b>
Alaska DEC UST	<a href="http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx">http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx</a>	UST-040
Arizona DHS	<a href="http://www.azdhs.gov/lab/license/env.htm">http://www.azdhs.gov/lab/license/env.htm</a>	AZ0339
Arkansas - DEQ	<a href="http://www.adeq.state.ar.us/techsvs/labcert.htm">http://www.adeq.state.ar.us/techsvs/labcert.htm</a>	88-0637
California DHS (ELAP)	<a href="http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx">http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx</a>	2795
DOD ELAP	<a href="http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm">http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm</a>	L14-51
Florida DOH	<a href="http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm">http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm</a>	E87412
Hawaii DOH	Not available	-
ISO 17025	<a href="http://www.pjlabs.com/">http://www.pjlabs.com/</a>	L16-57
Louisiana DEQ	<a href="http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx">http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx</a>	03016
Maine DHS	Not available	WA01276
Minnesota DOH	<a href="http://www.health.state.mn.us/accreditation">http://www.health.state.mn.us/accreditation</a>	053-999-457
Montana DPHHS	<a href="http://www.dphhs.mt.gov/publichealth/">http://www.dphhs.mt.gov/publichealth/</a>	CERT0047
Nevada DEP	<a href="http://ndep.nv.gov/bsdw/labservice.htm">http://ndep.nv.gov/bsdw/labservice.htm</a>	WA01276
New Jersey DEP	<a href="http://www.nj.gov/dep/oqa/">http://www.nj.gov/dep/oqa/</a>	WA005
North Carolina DWQ	<a href="http://www.dwqlab.org/">http://www.dwqlab.org/</a>	605
Oklahoma DEQ	<a href="http://www.deq.state.ok.us/CSDnew/labcert.htm">http://www.deq.state.ok.us/CSDnew/labcert.htm</a>	9801
Oregon - DEQ (NELAP)	<a href="http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx">http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx</a>	WA100010
South Carolina DHEC	<a href="http://www.scdhec.gov/environment/envserv/">http://www.scdhec.gov/environment/envserv/</a>	61002
Texas CEQ	<a href="http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html">http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html</a>	T104704427
Washington DOE	<a href="http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html">http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html</a>	C544
Wyoming (EPA Region 8)	<a href="http://www.epa.gov/region8/water/dwhome/wyomingdi.html">http://www.epa.gov/region8/water/dwhome/wyomingdi.html</a>	-
Kelso Laboratory Website	<a href="http://www.alsglobal.com">www.alsglobal.com</a>	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at [www.ALSGlobal.com](http://www.ALSGlobal.com) or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



## Case Narrative

**ALS Environmental—Kelso Laboratory**  
1317 South 13th Avenue, Kelso, WA 98626  
Phone (360)577-7222 Fax (360)636-1068  
[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

ALS ENVIRONMENTAL

Client: Analytical Consulting Technology, Inc      Service Request No.: K1702137  
Project: 2017030018      Date Received: 03/03/17  
Sample Matrix: Water

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier I data deliverables. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Six water samples were received for analysis at ALS Environmental on 03/03/17. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Steroids and Endocrine Disrupting Compounds by Method 1694

**Lab Control Sample Exceptions:**

The recovery of Urobilin in the laboratory control samples was outside the control limits listed in the results summary. The limits are default values temporarily in use until sufficient data points are generated to calculate statistical control limits. Based on the method and historic data, the recoveries observed were in the range expected for this procedure. No further corrective action was taken.

**Surrogate Exceptions:**

The control criteria were exceeded for Cotinine-d3 in sample 2017030018-2-5031 due to matrix interferences. Due to the presence of non-target background components that prevented adequate resolution of the surrogate, accurate quantitation was not possible. A reanalysis of the samples confirmed the original results. No further corrective action was appropriate.

The recovery of Atenolol-d7 in samples 2017030018-2-5031 and Method Blank was outside the control limits listed in the results summary. The limits are default values temporarily in use until sufficient data points are generated to calculate statistical control limits. Based on the method and historic data, the recoveries observed were in the range expected for this procedure. No further corrective action was taken.

**Elevated Detection Limits:**

The detection limit was elevated for all several analytes in all samples due to internal standard suppression from matrix. No further corrective action was taken.

No other anomalies associated with the analysis of these samples were observed.

Approved by





## Chain of Custody

**ALS Environmental—Kelso Laboratory**  
1317 South 13th Avenue, Kelso, WA 98626  
Phone (360)577-7222 Fax (360)636-1068  
[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER



800.865.7222  
www.caslab.com

Client: Analytical Consulting Technologies  
168 Railroad Hill Street Waterbury CT 06708  
email: actlabs@sbcglobal.net

Project: 2017030018  
Telephone No. 203-757-3980  
Fax No. 203-759-2155

**CHAIN OF CUSTODY**

Page \_\_\_ of \_\_\_

Method of Shipment  
UPS Priority  
2 Boxes

Special Detection  
Limit/Reporting

Sample I.D.	Lab Sample No.	No. of Containers	Matrix				Soil	Water	Air	Other	Yes	No	Sampling Date	Sampling Time	PPCP	Turn Around Time (working days)
			PSV	Yes	No	Other										
2017030018-1-5041		1	X									3/1/17	12:15	X		
2017030018-2-5031		1	X									3/1/17	12:45	X		
2017030018-3-2021		1	X									3/1/17	13:50	X		
2017030018-4-3104		1	X									3/1/17	14:30	X		
2017030018-5-2149		1	X									3/1/17	15:30	X		
2017030018-6-3101		1	X									3/1/17	16:00	X		

M A R K S

Sample Received Intact: Yes No		Temperature received:		Ice		No ice	
Relinq. by sampler (Sign & Print Name)	Date	Time	Received by (Sign & Print Name)	Date	Time	Received by	Date
<i>Oliver DeFronzo</i>	3/1	6:00 P	<i>D. C. Green</i>				
Relinquished by <i>W. Green</i>	3/2	5:00 PM	Received by UPS				
Relinquished by			<i>D. Green</i>	3/2	17 0930		
Relinquished by			Received by laboratory				

Lab Work No.

11102137



PC Hurt

### Cooler Receipt and Preservation Form

Client Analytical Consulting Service Request K17 02137  
 Received: 3/3/17 Opened: 3/3/17 By: 96 Unloaded: 3/3/17 By: 96

1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other NA
3. Were custody seals on coolers? NA Y N If yes, how many and where? \_\_\_\_\_  
 If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID	Tracking Number	NA	Filed
5.2	5.1	-	-	-1	308	NA	17X47402011005456		
5.2	5.1	-	-	-1	375		17X47402011005457		

4. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Were samples received in good condition (temperature, unbroken)? Indicate in the table below.  
 If applicable, tissue samples were received: Frozen Partially Thawed Thawed NA Y N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? Indicate major discrepancies in the table on page 2. NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
11. Were VOA vials received without headspace? Indicate in the table below. NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:
2017030018-1-5014	2017030018-1-5041	elimination
2017030018-3-2120	2017030018-3-2021	" "

Sample ID	Bottle Count	Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: # of containers: INCC says 1 but received 2-1L Ambers per sample.



## Steroids and Endocrine Disrupting Compounds

**ALS Environmental—Kelso Laboratory**  
1317 South 13th Avenue, Kelso, WA 98626  
Phone (360)577-7222 Fax (360)636-1068  
[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Analytical Consulting Technology, Inc (ACT Labs)  
**Project:**  
**Sample Matrix:** Water  
**Sample Name:** 2017030018-1-5041  
**Lab Code:** K1702137-001

**Service Request:** K1702137  
**Date Collected:** 03/01/17 12:15  
**Date Received:** 03/03/17 09:30

**Units:** ng/L  
**Basis:** NA

**Steroids and Endocrine Disrupting Compounds**

**Analysis Method:** 1694  
**Prep Method:** Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Acetaminophen	64	5.1	1	03/10/17 00:55	3/7/17	
Caffeine	980	2.0	1	03/10/17 00:55	3/7/17	
Carbamazepine	ND U	1.0	1	03/10/17 00:55	3/7/17	
Atenolol	ND U	250	50	03/17/17 04:17	3/7/17	
Cotinine	ND U	250	50	03/22/17 05:16	3/7/17	
Azithromycin	ND U	250	50	03/17/17 04:17	3/7/17	
Primidone	ND U	250	50	03/17/17 04:17	3/7/17	
Urobilin	ND U	250	50	03/17/17 04:17	3/7/17	*
1,7-Dimethylxanthine	ND U	250	50	03/17/17 04:17	3/7/17	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Acetaminophen-C13	47	10 - 179	03/10/17 00:55	
Caffeine-trimethyl-13C3	37	22 - 146	03/10/17 00:55	
Carbamazepine-d10	101	28 - 171	03/10/17 00:55	
Atenolol-d7	34	30 - 130	03/17/17 04:17	
Cotinine-d3	6	5 - 145	03/22/17 05:16	



ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

Client: Analytical Consulting Technology, Inc (ACT Labs)

Service Request: K1702137

Project:

Date Collected: 03/01/17 12:45

Sample Matrix: Water

Date Received: 03/03/17 09:30

Sample Name: 2017030018-2-5031

Units: ng/L

Lab Code: K1702137-002

Basis: NA

Steroids and Endocrine Disrupting Compounds

Analysis Method: 1694

Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Acetaminophen	71	50	1	03/10/17 01:16	3/7/17	
Caffeine	1400	20	1	03/10/17 01:16	3/7/17	
Carbamazepine	ND U	10	1	03/10/17 01:16	3/7/17	
Atenolol	ND U	500	10	03/16/17 04:19	3/7/17	
Cotinine	ND U	500	10	03/16/17 04:19	3/7/17	
Azithromycin	ND U	500	10	03/16/17 04:19	3/7/17	
Primidone	ND U	500	10	03/16/17 04:19	3/7/17	
Urobilin	ND U	500	10	03/16/17 04:19	3/7/17	*
1,7-Dimethylxanthine	980	500	10	03/16/17 04:19	3/7/17	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Acetaminophen-C13	71	10 - 179	03/10/17 01:16	
Caffeine-trimethyl-13C3	73	22 - 146	03/10/17 01:16	
Carbamazepine-d10	99	28 - 171	03/10/17 01:16	
Atenolol-d7	12	30 - 130	03/16/17 04:19	*
Cotinine-d3	3	5 - 145	03/16/17 04:19	*

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

Client: Analytical Consulting Technology, Inc (ACT Labs)  
Project:  
Sample Matrix: Water  
Sample Name: 2017030018-3-2021  
Lab Code: K1702137-003

Service Request: K1702137  
Date Collected: 03/01/17 13:50  
Date Received: 03/03/17 09:30

Units: ng/L  
Basis: NA

Steroids and Endocrine Disrupting Compounds

Analysis Method: 1694  
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Acetaminophen	13	5.4	1	03/10/17 01:37	3/7/17	
Caffeine	1500	22	10	03/10/17 03:43	3/7/17	
Carbamazepine	ND U	1.1	1	03/10/17 01:37	3/7/17	
Atenolol	ND U	270	50	03/17/17 04:42	3/7/17	
Cotinine	ND U	270	50	03/22/17 05:41	3/7/17	
Azithromycin	ND U	270	50	03/17/17 04:42	3/7/17	
Primidone	ND U	270	50	03/17/17 04:42	3/7/17	
Urobilin	ND U	270	50	03/17/17 04:42	3/7/17	*
1,7-Dimethylxanthine	ND U	270	50	03/17/17 04:42	3/7/17	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Acetaminophen-C13	52	10 - 179	03/10/17 01:37	
Caffeine-trimethyl-13C3	100	22 - 146	03/10/17 03:43	
Carbamazepine-d10	118	28 - 171	03/10/17 01:37	
Atenolol-d7	30	30 - 130	03/17/17 04:42	
Cotinine-d3	8	5 - 145	03/22/17 05:41	

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Analytical Report

**Client:** Analytical Consulting Technology, Inc (ACT Labs)  
**Project:**  
**Sample Matrix:** Water  
**Sample Name:** 2017030018-4-3104  
**Lab Code:** K1702137-004

**Service Request:** K1702137  
**Date Collected:** 03/01/17 14:30  
**Date Received:** 03/03/17 09:30

**Units:** ng/L  
**Basis:** NA

**Steroids and Endocrine Disrupting Compounds**

**Analysis Method:** 1694  
**Prep Method:** Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Acetaminophen	72	54	10	03/10/17 01:58	3/7/17	
Caffeine	2300	22	10	03/10/17 01:58	3/7/17	
Carbamazepine	ND U	11	10	03/10/17 01:58	3/7/17	
Atenolol	ND U	280	50	03/16/17 03:41	3/7/17	
Cotinine	610	280	50	03/16/17 03:41	3/7/17	
Azithromycin	ND U	280	50	03/16/17 03:41	3/7/17	
Primidone	ND U	280	50	03/16/17 03:41	3/7/17	
Urobilin	ND U	280	50	03/16/17 03:41	3/7/17	*
1,7-Dimethylxanthine	ND U	280	50	03/16/17 03:41	3/7/17	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Acetaminophen-C13	69	10 - 179	03/10/17 01:58	
Caffeine-trimethyl-13C3	79	22 - 146	03/10/17 01:58	
Carbamazepine-d10	95	28 - 171	03/10/17 01:58	
Atenolol-d7	80	30 - 130	03/16/17 03:41	
Cotinine-d3	12	5 - 145	03/16/17 03:41	

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Analytical Report

Client: Analytical Consulting Technology, Inc (ACT Labs)  
Project:  
Sample Matrix: Water  
Sample Name: 2017030018-5-2149  
Lab Code: K1702137-005

Service Request: K1702137  
Date Collected: 03/01/17 15:30  
Date Received: 03/03/17 09:30

Units: ng/L  
Basis: NA

Steroids and Endocrine Disrupting Compounds

Analysis Method: 1694  
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Acetaminophen	110	53	10	03/10/17 02:19	3/7/17	
Caffeine	3700	21	10	03/10/17 02:19	3/7/17	
Carbamazepine	ND U	11	10	03/10/17 02:19	3/7/17	
Atenolol	ND U	270	50	03/16/17 03:54	3/7/17	
Cotinine	450	270	50	03/16/17 03:54	3/7/17	
Azithromycin	ND U	270	50	03/16/17 03:54	3/7/17	
Primidone	ND U	270	50	03/16/17 03:54	3/7/17	
Urobilin	ND U	270	50	03/16/17 03:54	3/7/17	*
1,7-Dimethylxanthine	270	270	50	03/16/17 03:54	3/7/17	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Acetaminophen-C13	78	10 - 179	03/10/17 02:19	
Caffeine-trimethyl-13C3	76	22 - 146	03/10/17 02:19	
Carbamazepine-d10	83	28 - 171	03/10/17 02:19	
Atenolol-d7	86	30 - 130	03/16/17 03:54	
Cotinine-d3	8	5 - 145	03/16/17 03:54	

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Analytical Report

Client: Analytical Consulting Technology, Inc (ACT Labs)  
Project:  
Sample Matrix: Water  
Sample Name: 2017030018-6-3101  
Lab Code: K1702137-006

Service Request: K1702137  
Date Collected: 03/01/17 16:00  
Date Received: 03/03/17 09:30

Units: ng/L  
Basis: NA

Steroids and Endocrine Disrupting Compounds

Analysis Method: 1694  
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Acetaminophen	ND U	53	10	03/10/17 04:45	3/7/17	
Caffeine	1700	21	10	03/10/17 04:45	3/7/17	
Carbamazepine	ND U	11	10	03/10/17 04:45	3/7/17	
Atenolol	ND U	260	50	03/17/17 05:20	3/7/17	
Cotinine	ND U	260	50	03/22/17 06:19	3/7/17	
Azithromycin	ND U	260	50	03/17/17 05:20	3/7/17	
Primidone	ND U	260	50	03/17/17 05:20	3/7/17	
Urobilin	ND U	260	50	03/17/17 05:20	3/7/17	*
1,7-Dimethylxanthine	ND U	260	50	03/17/17 05:20	3/7/17	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Acetaminophen-C13	72	10 - 179	03/10/17 04:45	
Caffeine-trimethyl-13C3	68	22 - 146	03/10/17 04:45	
Carbamazepine-d10	81	28 - 171	03/10/17 04:45	
Atenolol-d7	61	30 - 130	03/17/17 05:20	
Cotinine-d3	14	5 - 145	03/22/17 06:19	

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Analytical Report

**Client:** Analytical Consulting Technology, Inc (ACT Labs)  
**Project:**  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** KQ1702443-03

**Service Request:** K1702137  
**Date Collected:** NA  
**Date Received:** NA

**Units:** ng/L  
**Basis:** NA

**Steroids and Endocrine Disrupting Compounds**

**Analysis Method:** 1694  
**Prep Method:** Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Acetaminophen	ND U	5.0	1	03/10/17 00:34	3/7/17	
Caffeine	ND U	2.0	1	03/10/17 00:34	3/7/17	
Carbamazepine	ND U	1.0	1	03/10/17 00:34	3/7/17	
Atenolol	ND U	5.0	1	03/16/17 03:28	3/7/17	
Cotinine	ND U	5.0	1	03/16/17 03:28	3/7/17	
Azithromycin	ND U	5.0	1	03/16/17 03:28	3/7/17	
Primidone	ND U	5.0	1	03/16/17 03:28	3/7/17	
Urobilin	ND U	5.0	1	03/16/17 03:28	3/7/17	
1,7-Dimethylxanthine	ND U	5.0	1	03/16/17 03:28	3/7/17	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Acetaminophen-C13	83	10 - 179	03/10/17 00:34	
Caffeine-trimethyl-13C3	75	22 - 146	03/10/17 00:34	
Carbamazepine-d10	77	28 - 171	03/10/17 00:34	
Atenolol-d7	15	30 - 130	03/16/17 03:28	*
Cotinine-d3	9	5 - 145	03/16/17 03:28	