# FORMER GASTOWN MGP SITE SITE NO. 915171

# 2013 LAB REPORTS FOR THE GROUNDWATER COLLECTION & TREATMENT SYSTEM





THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo 10 Hazelwood Drive Amherst, NY 14228-2298 Tel: (716)691-2600

TestAmerica Job ID: 480-32023-1

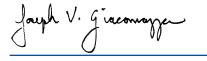
Client Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Sampling Event: Mthly Post-Carbon Mthly Pre-Carbon

#### For:

New York State D.E.C. 270 Michigan Avenue Buffalo, New York 14203

Attn: Mr. Glenn May



Authorized for release by: 1/31/2013 9:50:55 AM

Joe Giacomazza

Project Administrator

joe.giacomazza@testamericainc.com

Designee for

Brian Fischer

Project Manager II

brian.fischer@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Joseph V. giveonoge

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Joe Giacomazza Project Administrator 1/31/2013 9:50:55 AM

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TestAmerica Job ID: 480-32023-1

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

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# **Definitions/Glossary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

**Quality Control** 

Relative error ratio

Toxicity Equivalent Factor (Dioxin)

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

TestAmerica Job ID: 480-32023-1

#### **Qualifiers**

#### **General Chemistry**

| Qualifier | Qualifier Description                             |
|-----------|---|
| HF        | Field parameter with a holding time of 15 minutes |

#### **Glossary**

QC

RER

RPD

TEF

TEQ

RL

| Abbreviation   | These commonly used abbreviations may or may not be present in this report.                                |
|----------------|--|
| <del>\</del>   | Listed under the "D" column to designate that the result is reported on a dry weight basis                 |
| %R             | Percent Recovery   |
| CNF            | Contains no Free Liquid  |
| DER            | Duplicate error ratio (normalized absolute difference)   |
| DL, RA, RE, IN | Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC            | Decision level concentration   |
| EDL            | Estimated Detection Limit  |
| EPA            | United States Environmental Protection Agency  |
| MDA            | Minimum detectable activity  |
| MDC            | Minimum detectable concentration   |
| MDL            | Method Detection Limit   |
| ML             | Minimum Level (Dioxin)   |
| ND             | Not detected at the reporting limit (or MDL or EDL if shown)   |
| PQL            | Practical Quantitation Limit   |

#### **Case Narrative**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-32023-1

Job ID: 480-32023-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-32023-1

#### Receipt

The samples were received on 1/24/2013 5:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.7° C and 1.1° C.

#### Except:

The following sample was received unpreserved and was preserved upon receipt to the laboratory on 01/24/13 at 1810 using a prepreserved HNO3 250mL bottle: Pre-Carbon (480-32024-1). Regulatory documents require a 24-hour waiting period from the time of the addition of the acid preservative to the time of digestion.

#### GC/MS VOA

Method 8260B: The Matrix Spike Blank recovery for batch 480-101032 was outside TestAmerica's statistically developed internal laboratory QC limits some analytes. These analytes were not requested spiking compounds; therefore the recovery is being reported for advisory purposes only. All other quality control indicators, including the continuing calibration verification, were within method prescribed limits for these analytes.

No other analytical or quality issues were noted.

#### Ion Chromatography

Method 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-32024-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

#### **GC VOA**

No analytical or quality issues were noted.

#### Metals

No analytical or quality issues were noted.

#### **General Chemistry**

Method SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Post-Carbon (480-32023-1)

No other analytical or quality issues were noted.

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Client: New York State D.E.C. Project/Site: NYSDEC-Gastown WWTP: Site# 915171

**Client Sample ID: Post-Carbon** 

Date Collected: 01/24/13 17:00 Date Received: 01/24/13 17:45 Lab Sample ID: 480-32023-1

**Matrix: Wastewater** 

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| 1,1,1-Trichloroethane       | ND     |           | 1.0 | 0.82 | ug/L |   |          | 01/25/13 14:33 | 1       |
| 1,1,2,2-Tetrachloroethane   | ND     |           | 1.0 | 0.21 | ug/L |   |          | 01/25/13 14:33 | 1       |
| 1,1,2-Trichloroethane       | ND     |           | 1.0 | 0.23 | ug/L |   |          | 01/25/13 14:33 | 1       |
| 1,1-Dichloroethane          | ND     |           | 1.0 | 0.38 | ug/L |   |          | 01/25/13 14:33 | 1       |
| 1,1-Dichloroethene          | ND     |           | 1.0 | 0.29 | ug/L |   |          | 01/25/13 14:33 | 1       |
| 1,2-Dichloroethane          | ND     |           | 1.0 | 0.21 | ug/L |   |          | 01/25/13 14:33 | 1       |
| 1,2-Dichloroethene, Total   | ND     |           | 2.0 | 0.70 | ug/L |   |          | 01/25/13 14:33 | 1       |
| 1,2-Dichloropropane         | ND     |           | 1.0 | 0.72 | ug/L |   |          | 01/25/13 14:33 | 1       |
| 2-Hexanone                  | ND     |           | 5.0 | 1.2  | ug/L |   |          | 01/25/13 14:33 | 1       |
| 2-Butanone (MEK)            | ND     |           | 10  | 1.3  | ug/L |   |          | 01/25/13 14:33 | 1       |
| 4-Methyl-2-pentanone (MIBK) | ND     |           | 5.0 | 2.1  | ug/L |   |          | 01/25/13 14:33 | 1       |
| Acetone                     | ND     |           | 10  | 3.0  | ug/L |   |          | 01/25/13 14:33 | 1       |
| Benzene                     | ND     |           | 1.0 | 0.41 | ug/L |   |          | 01/25/13 14:33 | 1       |
| Bromodichloromethane        | ND     |           | 1.0 | 0.39 | ug/L |   |          | 01/25/13 14:33 | 1       |
| Bromoform                   | ND     |           | 1.0 | 0.26 | ug/L |   |          | 01/25/13 14:33 | 1       |
| Bromomethane                | ND     |           | 1.0 | 0.69 | ug/L |   |          | 01/25/13 14:33 | 1       |
| Carbon disulfide            | ND     |           | 1.0 | 0.19 | ug/L |   |          | 01/25/13 14:33 | 1       |
| Carbon tetrachloride        | ND     |           | 1.0 | 0.27 | ug/L |   |          | 01/25/13 14:33 | 1       |
| Chlorobenzene               | ND     |           | 1.0 | 0.75 | ug/L |   |          | 01/25/13 14:33 | 1       |
| Dibromochloromethane        | ND     |           | 1.0 | 0.32 | ug/L |   |          | 01/25/13 14:33 | 1       |
| Chloroethane                | ND     |           | 1.0 | 0.32 | ug/L |   |          | 01/25/13 14:33 | 1       |
| Chloroform                  | ND     |           | 1.0 | 0.34 | ug/L |   |          | 01/25/13 14:33 | 1       |
| Chloromethane               | ND     |           | 1.0 | 0.35 | ug/L |   |          | 01/25/13 14:33 | 1       |
| cis-1,3-Dichloropropene     | ND     |           | 1.0 | 0.36 | ug/L |   |          | 01/25/13 14:33 | 1       |
| Ethylbenzene                | ND     |           | 1.0 | 0.74 | ug/L |   |          | 01/25/13 14:33 | 1       |
| Methylene Chloride          | ND     |           | 1.0 | 0.44 | ug/L |   |          | 01/25/13 14:33 | 1       |
| Styrene                     | ND     |           | 1.0 | 0.73 | ug/L |   |          | 01/25/13 14:33 | 1       |
| Tetrachloroethene           | ND     |           | 1.0 | 0.36 | ug/L |   |          | 01/25/13 14:33 | 1       |
| Toluene                     | ND     |           | 1.0 | 0.51 | ug/L |   |          | 01/25/13 14:33 | 1       |
| trans-1,3-Dichloropropene   | ND     |           | 1.0 | 0.37 | ug/L |   |          | 01/25/13 14:33 | 1       |
| Trichloroethene             | ND     |           | 1.0 | 0.46 | ug/L |   |          | 01/25/13 14:33 | 1       |
| Vinyl chloride              | ND     |           | 1.0 | 0.90 | ug/L |   |          | 01/25/13 14:33 | 1       |
| Vinyl acetate               | ND     |           | 5.0 |      | ug/L |   |          | 01/25/13 14:33 | 1       |
| Xylenes, Total              | ND     |           | 2.0 | 0.66 | ua/l |   |          | 01/25/13 14:33 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Pro | epared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|-----|--------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 91        |           | 66 - 137 |     |        | 01/25/13 14:33 | 1       |
| Toluene-d8 (Surr)            | 92        |           | 71 - 126 |     |        | 01/25/13 14:33 | 1       |
| 4-Bromofluorobenzene (Surr)  | 89        |           | 73 - 120 |     |        | 01/25/13 14:33 | 1       |

Method: 8021B - Volatile Organic Compounds (GC)

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|-----------------------------|----------------|-----------|------|-------|------|---|----------|----------------|---------|
| Analyte                     | Result         | Qualifier | RL   | MDL   | Unit | D | Prepared | Analyzed       | Dil Fac |
| 1,2,4-Trimethylbenzene      | ND             |           | 0.20 | 0.035 | ug/L |   |          | 01/28/13 15:07 | 1       |
| 1,3,5-Trimethylbenzene      | ND             |           | 0.20 | 0.15  | ug/L |   |          | 01/28/13 15:07 | 1       |
| Benzene                     | ND             |           | 0.20 | 0.023 | ug/L |   |          | 01/28/13 15:07 | 1       |
| Ethylbenzene                | ND             |           | 0.20 | 0.029 | ug/L |   |          | 01/28/13 15:07 | 1       |
| Isopropylbenzene            | ND             |           | 0.20 | 0.027 | ug/L |   |          | 01/28/13 15:07 | 1       |
| Methyl tert-butyl ether     | ND             |           | 0.40 | 0.044 | ug/L |   |          | 01/28/13 15:07 | 1       |
| m,p-Xylene                  | ND             |           | 0.40 | 0.054 | ug/L |   |          | 01/28/13 15:07 | 1       |
| n-Butylbenzene              | ND             |           | 0.20 | 0.031 | ug/L |   |          | 01/28/13 15:07 | 1       |
|                             |                |           |      |       |      |   |          |                |         |

TestAmerica Buffalo

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Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-32023-1

Lab Sample ID: 480-32023-1

**Matrix: Wastewater** 

### **Client Sample ID: Post-Carbon**

Date Collected: 01/24/13 17:00 Date Received: 01/24/13 17:45

| Analyte  | Result                         | Qualifier   | RL         | MDL                   | Unit         | D        | Prepared                   | Analyzed                 | Dil Fac |
|--|--------------------------------|-------------|------------|-----------------------|--------------|----------|----------------------------|--------------------------|---------|
| n-Propylbenzene  | ND                             |             | 0.20       | 0.13                  | ug/L         |          |                            | 01/28/13 15:07           | 1       |
| o-Xylene   | ND                             |             | 0.20       | 0.027                 | ug/L         |          |                            | 01/28/13 15:07           | 1       |
| p-Cymene   | ND                             |             | 0.20       | 0.030                 | ug/L         |          |                            | 01/28/13 15:07           | 1       |
| sec-Butylbenzene   | ND                             |             | 0.20       | 0.020                 | ug/L         |          |                            | 01/28/13 15:07           | 1       |
| Toluene  | ND                             |             | 0.20       | 0.036                 | ug/L         |          |                            | 01/28/13 15:07           | 1       |
| Xylenes, Total   | ND                             |             | 0.60       | 0.054                 | ug/L         |          |                            | 01/28/13 15:07           | 1       |
| Method: 200.7 Rev 4.4 - Metals   | • •                            | 0 115       |            |                       |              | _        |                            |                          | B.: F   |
| Method: 200.7 Rev 4.4 - Metals   | (ICP)                          |             |            |                       |              |          |                            |                          |         |
| Analyte  | Result                         | Qualifier   | RL         | MDL                   |              | D        | Prepared 00.05             | Analyzed                 | Dil Fac |
| Analyte  | • •                            | Qualifier   | RL<br>50.0 |                       | Unit<br>ug/L | <u>D</u> | Prepared 01/25/13 09:05    | Analyzed 01/25/13 14:37  | Dil Fac |
| Analyte Iron   | Result                         | Qualifier _ |            |                       |              | <u>D</u> |                            |                          | Dil Fac |
| Analyte Iron General Chemistry   | Result 153                     | Qualifier - |            | 19.3                  |              | <u>D</u> |                            |                          | Dil Fac |
| Analyte Iron General Chemistry Analyte   | Result 153                     |             | 50.0       | 19.3                  | ug/L         |          | 01/25/13 09:05             | 01/25/13 14:37           | 1       |
| Method: 200.7 Rev 4.4 - Metals Analyte Iron General Chemistry Analyte Cyanide, Total Analyte | Result   153     Result   0.27 |             | 50.0       | 19.3<br>MDL<br>0.0050 | ug/L<br>Unit |          | 01/25/13 09:05<br>Prepared | 01/25/13 14:37  Analyzed | 1       |

Client: New York State D.E.C.

Date Received: 01/24/13 17:45

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-32023-1

Lab Sample ID: 480-32024-1

Matrix: Wastewater

Client Sample ID: Pre-Carbon Date Collected: 01/24/13 17:10

| Method: 200.7 Rev 4.4 - Metals ( | (ICP)    |          |      |      |      |   |                |                |         |
|----------------------------------|----------|----------|------|------|------|---|----------------|----------------|---------|
| Analyte                          | Result Q | ualifier | RL   | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Calcium                          | 141000   |          | 500  | 100  | ug/L |   | 01/25/13 09:05 | 01/25/13 14:39 | 1       |
| Iron                             | 414      |          | 50.0 | 19.3 | ug/L |   | 01/25/13 09:05 | 01/25/13 14:39 | 1       |
| Magnesium                        | 75900    |          | 200  | 43.4 | ug/L |   | 01/25/13 09:05 | 01/25/13 14:39 | 1       |
| Potassium                        | 4580     |          | 500  | 100  | ug/L |   | 01/25/13 09:05 | 01/25/13 14:39 | 1       |
| Sodium                           | 94500    |          | 1000 | 324  | ug/L |   | 01/25/13 09:05 | 01/25/13 14:39 | 1       |
| General Chemistry                |          |          |      |      |      |   |                |                |         |
| Analyte                          | Result Q | ualifier | RL   | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Chloride                         | 95.3     |          | 1.0  | 0.56 | mg/L |   |                | 01/29/13 14:33 | 2       |
| Sulfate                          | 134      |          | 4.0  | 0.70 | mg/L |   |                | 01/29/13 14:33 | 2       |
| Alkalinity, Total                | 471      |          | 100  | 40.0 | mg/L |   |                | 01/25/13 01:01 | 10      |

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#### **Lab Chronicle**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-32023-1

Lab Sample ID: 480-32023-1

Matrix: Wastewater

Client Sample ID: Post-Carbon

Date Collected: 01/24/13 17:00 Date Received: 01/24/13 17:45

|           | Batch    | Batch         |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|---------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method        | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8260B         |     | 1        | 101032 | 01/25/13 14:33 | LH      | TAL BUF |
| Total/NA  | Analysis | 8021B         |     | 1        | 101173 | 01/28/13 15:07 | DB      | TAL BUF |
| Total/NA  | Prep     | 200.7         |     |          | 101004 | 01/25/13 09:05 | SS      | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |     | 1        | 101192 | 01/25/13 14:37 | MM      | TAL BUF |
| Total/NA  | Analysis | SM 4500 H+ B  |     | 1        | 101135 | 01/25/13 19:56 | KS      | TAL BUF |
| Total/NA  | Prep     | Distill/CN    |     |          | 101136 | 01/25/13 17:49 | LAW     | TAL BUF |
| Total/NA  | Analysis | 335.4         |     | 1        | 101163 | 01/27/13 23:32 | BM      | TAL BUF |

Client Sample ID: Pre-Carbon

Date Collected: 01/24/13 17:10

Date Received: 01/24/13 17:45

| Lab | Sam | ріе | ID:  | 48    | U-3 | 20   | <b>24</b> - |  |
|-----|-----|-----|------|-------|-----|------|-------------|--|
|     |     |     | Matr | iv: 1 | Wa. | etas | wato        |  |

|           | Batch    | Batch         |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|---------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method        | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Prep     | 200.7         |     |          | 101004 | 01/25/13 09:05 | SS      | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |     | 1        | 101192 | 01/25/13 14:39 | MM      | TAL BUF |
| Total/NA  | Analysis | 310.2         |     | 10       | 100984 | 01/25/13 01:01 | PJQ     | TAL BUF |
| Total/NA  | Analysis | 300.0         |     | 2        | 101364 | 01/29/13 14:33 | KC      | TAL BUF |

#### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# **Certification Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-32023-1

#### Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority         | Program       | EPA Region | Certification ID | Expiration Date |
|-------------------|---------------|------------|------------------|-----------------|
| Arkansas DEQ      | State Program | 6          | 88-0686          | 07-06-13        |
| California        | NELAP         | 9          | 1169CA           | 09-30-13        |
| Connecticut       | State Program | 1          | PH-0568          | 09-30-14        |
| Florida           | NELAP         | 4          | E87672           | 06-30-13        |
| Georgia           | State Program | 4          | N/A              | 03-31-13        |
| Georgia           | State Program | 4          | 956              | 06-30-13        |
| Georgia           | State Program | 4          | 956              | 06-30-13        |
| Illinois          | NELAP         | 5          | 200003           | 09-30-13        |
| owa               | State Program | 7          | 374              | 03-01-13        |
| Kansas            | NELAP         | 7          | E-10187          | 01-31-13        |
| Kentucky          | State Program | 4          | 90029            | 12-31-13        |
| Kentucky (UST)    | State Program | 4          | 30               | 04-01-13        |
| Louisiana         | NELAP         | 6          | 02031            | 06-30-13        |
| Maine             | State Program | 1          | NY00044          | 12-04-13        |
| Maryland          | State Program | 3          | 294              | 03-31-13        |
| Massachusetts     | State Program | 1          | M-NY044          | 06-30-13        |
| Michigan          | State Program | 5          | 9937             | 04-01-13        |
| Minnesota         | NELAP         | 5          | 036-999-337      | 12-31-13        |
| New Hampshire     | NELAP         | 1          | 2973             | 09-11-13        |
| New Hampshire     | NELAP         | 1          | 2337             | 11-17-13        |
| New Jersey        | NELAP         | 2          | NY455            | 06-30-13        |
| New York          | NELAP         | 2          | 10026            | 03-31-13        |
| North Dakota      | State Program | 8          | R-176            | 03-31-13        |
| Oklahoma          | State Program | 6          | 9421             | 08-31-13        |
| Oregon            | NELAP         | 10         | NY200003         | 06-09-13        |
| Pennsylvania      | NELAP         | 3          | 68-00281         | 07-31-13        |
| Rhode Island      | State Program | 1          | LAO00328         | 12-31-13        |
| Tennessee         | State Program | 4          | TN02970          | 04-01-13        |
| Texas             | NELAP         | 6          | T104704412-11-2  | 07-31-13        |
| USDA              | Federal       |            | P330-11-00386    | 11-22-14        |
| Virginia          | NELAP         | 3          | 460185           | 09-14-13        |
| Washington        | State Program | 10         | C784             | 02-10-13        |
| West Virginia DEP | State Program | 3          | 252              | 09-30-13        |
| Wisconsin         | State Program | 5          | 998310390        | 08-31-13        |

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# **Method Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-32023-1

| Method        | Method Description                 | Protocol | Laboratory |
|---------------|------------------------------------|----------|------------|
| 8260B         | Volatile Organic Compounds (GC/MS) | SW846    | TAL BUF    |
| 8021B         | Volatile Organic Compounds (GC)    | SW846    | TAL BUF    |
| 200.7 Rev 4.4 | Metals (ICP)                       | EPA      | TAL BUF    |
| 300.0         | Anions, Ion Chromatography         | MCAWW    | TAL BUF    |
| 310.2         | Alkalinity                         | MCAWW    | TAL BUF    |
| 335.4         | Cyanide, Total                     | MCAWW    | TAL BUF    |
| SM 4500 H+ B  | PΗ                                 | SM       | TAL BUF    |

#### **Protocol References:**

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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# **Sample Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-32023-1

| Lab Sample ID | Client Sample ID | Matrix     | Collected      | Received       |
|---------------|------------------|------------|----------------|----------------|
| 480-32023-1   | Post-Carbon      | Wastewater | 01/24/13 17:00 | 01/24/13 17:45 |
| 480-32024-1   | Pre-Carbon       | Wastewater | 01/24/13 17:10 | 01/24/13 17:45 |

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| TestAmerica Buffalo<br>10 Hzzelwood Drive<br>Amherst, NY 14228-2298<br>Phone (716) 691-2800 Fax (716) 691-7991 |                                | Chain of Custody Record  THE LEADER IN ENVIRONMENT |                     |  |                 |              |                                |                                       |                        |                |               | Merico                                |         |               |        |  |  |
|--|--------------------------------|--|---------------------|--|-----------------|--------------|--------------------------------|---------------------------------------|------------------------|----------------|---------------|---------------------------------------|---------|---------------|--------|--|--|
| Client Information   | Sampler:                       | alm  |                     | Lab  | M:<br>her, Br   | ion.         | _                              | _                                     | _                      |                | Car           | rier Track                            | ing No( | 3):           |        | COC No:<br>480-30382-1177.   |  |
| Client Contact:  | Phone: /UKU                    | 325-0  | 20/                 | E-Ma   | ill:            | _            |                                |                                       | _                      |                | _             |                                       |         |               |        | Page:  |  |
| Thomas Palmer  | 1787.                          | 00570  | <i>500</i>          | bria   | n.fische        | r@te         | stame                          | ericain                               | c.con                  | n              |               |                                       |         |               |        | Page 1 of 1  |  |
| Company:<br>Groundwater & Environmental Services Inc   |                                |  |                     |  |                 |              |                                |                                       | Ana                    | alysis i       | Reque         | sted                                  |         |               |        | Job#:  |  |
| Address:   | Due Date Requests              | id:  |                     |  |                 |              |                                |                                       | Т                      | Ť              | T             | П                                     | $\neg$  | $\Box$        |        | Preservation Cod   | les:   |
| 195 Aero Drive Suite 3  ity: Cheektowaga  State, Zip: 1Y, 14225  | TAT Requested (da              | iys):  |                     |  |                 |              |                                |                                       |                        |                |               |                                       |         |               |        | A - HCL<br>B - NaOH<br>C - Zn Acetate<br>D - Nitric Acid<br>E - NaHSO4 | M - Hexane<br>N - None<br>O - AsNaO2<br>P - Na2O4S<br>Q - Na2SO3 |
| 77, 14225<br>70008 (200) 287 - 785 7<br>Email:   | PO#:<br>Purchase Order<br>WO#: | not requir   |                     |  |                 |              |                                | - 8021                                |                        |                |               |                                       |         |               |        | F - MeOH<br>G - Amchlor<br>H - Ascorbic Acid<br>I - Ice                | R - Na2S2SO3<br>S - H2SO4<br>T - TSP Dodecahydra<br>U - Acetone  |
| palmer@gesonline.com   |                                |  |                     |  |                 |              | 3                              | ğ                                     |                        | - 1 - 1        | - 1           | 11                                    | -       |               |        | J - DI Water<br>K - EDTA   | V-MCAA<br>W-ph 4-5   |
| Project Name:<br>NYSDEC - Gastown WWTP/Gastown Event Desc: Mthly Post-Ca                                       | Project #:<br>48002525         |  |                     |  | 25              |              |                                | #                                     |                        |                |               |                                       |         |               |        | L-EDIA   | Z - other (specify)  |
| Site:  | SSOW#:                         |  |                     |  |                 |              | Ĭ                              | 88                                    | <u>.</u>               |                |               |                                       |         |               | 3      | Other:   |  |
| New York   |                                |  | Sample<br>Type      | Matrix<br>(w                                     |                 | 200.7 - Iron | 8280B - (MOD) TCL list OLM04.2 | 9021B - (MOD) STARS List - VOA - 8021 | 336.4 - Cyanide, Total | 3M4500_H+ - pH |               |                                       |         |               |        |  |  |
| Bample Identification  | Sample Date                    | Sample<br>Time                                     | (C=comp,<br>G=grab) | O-uncte/oll,<br>BT-Tissue, A-Air<br>BOTI Codds   |                 | 200.7        | 82606                          | 80218                                 | 336.4                  | SM48           |               | · · · · · · · · · · · · · · · · · · · | 25%     |               | 1 1 X  | Special In   | structions/Note:   |
| Post-Carbon  | 1-24-13                        | 1700   | G                   | Water  | NN              | 1            | 3                              | 3                                     | 1                      | 1              | Miles & 13667 | 20000 400                             |         |               |        |  | a C (1980) N. H. Lank Ball V. P. (1997) Name of                  |
|  | 7013                           |  | <u> </u>            |  | Ħ               | +            | F                              |                                       | +                      | 1              | $\top$        | $\vdash$                              | +       | +             |        |  |  |
|  |                                |  |                     |  | Н               | $\vdash$     | H                              | $\vdash$                              | +                      | +              | +             | +                                     | +       | ++            |        |  |  |
|  |                                |  |                     |  | ₩               | $\vdash$     | $\vdash$                       | $\vdash$                              | +                      | +              | +             | +                                     | +       | ++            | l da   |  |  |
|  |                                |  |                     |  | ш               | ┖            |                                | Ш                                     | 4                      | $\perp$        | $\perp$       | $\perp$                               | $\perp$ | $\perp \perp$ |        |  |  |
|  |                                |  |                     |  | Ш               |              |                                |                                       |                        |                |               |                                       |         |               |        |  |  |
|  |                                |  |                     |  | П               |              |                                |                                       | Т                      |                |               | П                                     | Т       | П             |        |  |  |
|  |                                |  |                     |  | Ħ               |              |                                | $\Box$                                | $\top$                 |                | $\top$        |                                       | $\top$  | t +           |        |  |  |
| <del></del>  |                                |  | <del>-</del>        | <del>                                     </del> | H               | ╁            |                                | $\vdash$                              | +                      | +              | +             | + +                                   | +       | ++            |        |  |  |
|  |                                |  |                     |  | ₩.              | _            |                                | $\vdash$                              | +                      | $\perp$        | +             | +                                     | +       | ++            |        |  |  |
|  |                                |  |                     |  | Ш               |              |                                |                                       |                        |                |               | Ш                                     | 丄       | $\perp \perp$ |        |  |  |
|  |                                |  |                     |  | 11              |              |                                |                                       |                        |                |               | $  \cdot  $                           |         |               |        |  |  |
|  |                                |  |                     |  | П               |              | П                              | П                                     | T                      |                |               | П                                     |         |               |        |  |  |
| Possible Hazard Identification   |                                |  |                     |  | ₩ <sub>Si</sub> | mple         | Dis                            | osai                                  | (A fe                  | e may b        | e asse        | sed if s                              | ample   | s are re      | tained | l longer than 1 m  | onth)  |
| Non-Hazard Flammable Skin Irritant Poison Deliverable Requested: I, II, III, IV, Other (specify)               | B Unknow                       | n Rac  | diological          |  |                 | $\Box_R$     | Return                         | To C                                  | ient                   |                | Dispo         | sal By L                              |         |               | rchiv  | e For  | Months   |
| Empty Kit Relinquished by:   |                                | Date:  |                     |  | Time            |              | _                              | _                                     |                        |                |               | Method                                | of Ship |               |        |  |  |
| Relinquistages Um D/hlm  | Date/Time:                     | 117  | 15                  | Company G  | ES              | Rec          | 72                             | 1/                                    | >/                     |                |               |                                       | Da      | e/lime:       | 13     | 1795   | TABLIFAL   |
| Relinquished by:   | Date/Time:                     |  |                     | Сотрапу  |                 | POS          | pi belie                       | -                                     | /                      |                |               |                                       |         | /Time:/       | .,_    | , ,,   | Company  |
| Relinquished by:   | Date/Time:                     |  |                     | Company  |                 | 100          | eived I                        | by:                                   | _                      |                |               |                                       | Dar     | a/Time:       |        |  | Company  |
|  |                                |  |                     |  |                 | 1            |                                |                                       |                        |                |               |                                       | 1       |               |        |  |  |







| hone (716) 691-2600 Fax (716) 691-7991  Client Information  lient Contact: homas Palmer ompany: iroundwater & Environmental Services Inc ddress: journal Services Inc ddress: y, 14225 hone: (200) 187-7857 mail: halmer@gesonline.com roject Name: YSDEC - Gastown WWTP/Gastown Event Desc: Mthly Pr  | Due Date Request  TAT Requested (di  PO #: Purchase Order WO #: Project #:                    | ) 325-<br>ed:<br>eye):                           | 0206             | Fis-            | PM:<br>cher, Bri<br>lail:<br>an.fische |                                | tameri                     |                           | om<br>nalysis R | _        | er Trackin | g No(s):     |          | COC No:<br>480-30373-11<br>Page:<br>Page 1 of 1<br>Job#:   | 176.1                                 |
|--|---|--|------------------|-----------------|--|--------------------------------|----------------------------|---------------------------|-----------------|----------|------------|--------------|----------|--|---------------------------------------|
| lient Contact: homas Palmer ompany: iroundwater & Environmental Services Inc ddress: sty: heektowaga tate, Zip: Y, 14225 hone: (Q60) 187-7857 mail: halmer@gesonline.com roject Name: YSDEC - Gastown WWTP/Gastown Event Desc: Mthly Pr  | Phone: (YGY  Due Date Request  TAT Requested (di  TO  PO #: Purchase Order  WO #:  Project #: | ) 325-<br>ed:<br>eye):                           | 0206             | E-M             | lail:                                  |                                | tameri                     |                           |                 | eques    |            |              |          | Page 1 of 1  | 170.1                                 |
| ompany: roundwater & Environmental Services Inc ddress: 95 Aero Drive Suite 3 ity: heektowaga late, Zp: Y, 14225 hone: (Q60) 187-7857 mail: halmer@gesonline.com roject Name: YSDEC - Gastown WWTP/Gastown Event Desc: Mthly Pr  | Due Date Request  TAT Requested (di  PO #: Purchase Order WO #: Project #:                    | ed:  |                  | bria            | an.fische                              | @tes                           | tameri                     |                           |                 | eques    |            |              |          |  |                                       |
| iroundwater & Environmental Services Inc ddress: jobs Aero Drive Suite 3 jobs  | TAT Requested (di   | ays):  |                  |                 |  |                                |                            | A                         | nalysis R       | eane     |            |              |          | Job#:  |                                       |
| 95 Aero Drive Suite 3 ity: heektowaga tate, Zp: Y, 14225 hone: (Q <sub>00</sub> ) 787-7857 mail: halmer@gesonline.com roject Name: YSDEC - Gastown WWTP/Gastown Event Desc: Mthly Pr   | TAT Requested (di   | ays):  |                  |                 | 100                                    |                                |                            |                           | <u> </u>        |          | stea       |              |          |  |                                       |
| ity: heektowaga tithe, Zp: Y, 14225 hone: (Q00) 187-7857 mail: halmer@gesonline.com roject Name: YSDEC - Gastown WWTP/Gastown Event Desc: Mthly Pr   | PO#: Purchase Order WO#: Project #:   |  |                  |                 |  |                                | - 1                        |                           | 1 1 1           | Ť        | ГΤ         | TT           |          | Preservation   | Codes:                                |
| tate, Zp: Y, 14225 hone: (Q60) 187.7857 mail: halmer@gesonline.com roject Name: YSDEC - Gastown WWTP/Gastown Event Desc: Mthly Pr  | PO#: Purchase Order WO#: Project #:   |  |                  |                 |  |                                |                            |                           |                 |          | 1 1        | 11           |          | A - HCL<br>B - NaOH  | M - Hexane<br>N - None                |
| IY, 14225  hone: (Q60) 187-7857  mail: halmer@gesonline.com hyset Name: IYSDEC - Gastown WWTP/Gastown Event Desc: Mthly Pr   | PO#: Purchase Order WO#: Project #:   |  |                  |                 |  | Н                              | - 1                        |                           |                 | 1        |            | 11           |          | C - Zn Acetate<br>D - Nitric Acid  | O - AsNaO2<br>P - Na2O4S              |
| (Q00) (18 / 1753 / mail: | Purchase Order WO#: Project #:  | not requir                                       |                  |                 | 100 K                                  | ΙI                             |                            |                           |                 |          |            |              |          | E - NaHSO4   | Q - Na2SO3                            |
| mail:<br>salmer@gesonline.com<br>roject.Name:<br>YSDEC - Gastown WWTP/Gastown Event Desc: Mthly Pr   | WO#: Project#:  | not requir                                       |                  |                 |  | Ш                              |                            |                           |                 |          | Н          | П            |          | G - Amchior  | R - Na2S2SO3<br>S - H2SO4             |
| oalmer@gesonline.com<br>roject Name:<br>IYSDEC - Gastown WWTP/Gastown Event Desc: Mthly Pi   | Project #:  |  |                  |                 | -13                                    | IJ                             |                            |                           |                 |          |            | 1 1          |          | H - Ascorbic Ac  | id T - TSP Dodecahydra<br>U - Acetone |
| YSDEC - Gastown WWTP/Gastown Event Desc: Mthly Pr  |   |  |                  |                 |  |                                | *                          | -                         |                 |          |            | $\mathbf{I}$ |          | J - DI Water<br>K - EDTA   | V - MCAA<br>W - ph 4-5                |
|  |   |  |                  |                 | 1                                      | 300.0_28D - (MOD) Local Method | ğ l                        |                           |                 |          |            |              |          | L - EDA  | Z - other (specify)                   |
| ite:   | SSOW#:  |  |                  |                 |  | ١٤                             | ቜ   3                      | <b>.</b>                  |                 |          |            | 11           |          | Other:   |                                       |
| lew York   |   |  |                  |                 | -11                                    | ĝ                              | 3   2                      | اخ                        |                 | -        |            | 11           |          | \$ <del></del>   |                                       |
|  |   | l  | Sample           | Matrix          |  | 9-0                            | 200.7 - (MOD) Local Method | 310.2 - Alkalinity, Total |                 | 1        | 1 1        | 11           |          |  |                                       |
|  |   | Sample   | Type<br>(C=comp. | 0-sold,         |  | 8                              | <u> </u>                   | ۲ <u>۲</u>                |                 | -        |            | 11           |          | =  |                                       |
| ample Identification   | Sample Date   | Time   | G=grab)          | BT=Tissue, A=Al | -)[6]                                  | 300                            | 8                          | 第                         |                 |          |            |              |          | Specia   | i instructions/Note:                  |
|  |   | 16   | Preservi         | for Care        | XX                                     | khini në                       | D.S. N                     | 5                         |                 |          |            |              |          | X  | Experience of the second              |
| re-Carbon  | 1.24-13   | 1710   | G                | Water           | NW.                                    | ١                              | 1 1                        |                           |                 |          |            |              |          | * Lub  | pivaled bet                           |
|  |   |  |                  |                 | П                                      | П                              | $\neg$                     |                           |                 |          |            | П            |          | For  | 200.7 not                             |
|  |   | _  | _                |                 | 11                                     | Н                              | $\neg$                     | +                         | 1               |          |            | +            | $\neg$   | Salary   | presend. No                           |
|  |   | <del>-</del>                                     |                  |                 | ₩                                      | $\vdash$                       | $\dashv$                   | +                         | 1               | +        | ₩          | +            | +        | CONTRACT OF THE PARTY OF THE PA |                                       |
|  |   |  |                  |                 | 11                                     | Ш                              | $\perp$                    | $\bot$                    |                 |          | $\vdash$   | ++           | $\perp$  | <u> </u>   | 1003 .                                |
|  |   |  |                  |                 | Ш                                      |                                |                            |                           | 3               |          |            |              |          |  |                                       |
|  |   |  |                  |                 | П                                      | П                              |                            |                           |                 |          |            | П            |          |  |                                       |
|  |   |  |                  |                 | +                                      | Н                              | 十                          |                           |                 |          |            | $\top$       | $\Box$   | 77   |                                       |
|  |   | -  |                  |                 | ₩                                      |                                | +                          | +                         |                 |          | ╁          | +            | +i       |  |                                       |
|  |   |  |                  |                 | Ш.                                     | Ш                              | $\dashv$                   | $\perp$                   |                 | <u> </u> | $\vdash$   | $\bot$       | $\perp$  |  |                                       |
|  |   |  |                  |                 | Ш                                      |                                |                            |                           |                 | _        |            |              |          |  |                                       |
|  |   |  |                  |                 | П                                      | П                              |                            |                           | 1               |          |            |              |          |  |                                       |
|  |   | <del>                                     </del> | †                |                 | +                                      | П                              | $\top$                     | $\top$                    |                 |          |            | 11           |          | 7.43   |                                       |
| Possible Hazard Identification   |   |  |                  |                 | Н,                                     | mole                           | Dieno                      | sal ( A                   | foe may be      | 20220    | sori H es  | moles        | re retal | ned longer than  | 1 month)                              |
|  | Poison B Unknow   | n 🗔  | diological       |                 | ľ                                      | $\Box_{R}$                     | etum T                     | o Clien                   | , =             |          | al By La   |              | □ ¬Arc   | hive For   | Months                                |
| Deliverable Requested: I, II, III, IV, Other (specify)   | , didding district  |  | alological       |                 | Sp                                     | ecial I                        | nstruc                     | tions/Q                   | C Requirem      | ents:    | <u>-</u> , | _            |          |  |                                       |
| Empty Kit Relinquished by:   |   | Date:  |                  |                 | Time                                   | _                              | _                          |                           |                 |          | Method     | of Shipme    | nt:      |  |                                       |
| telinguished ## / / / / /  | Date/Time:  |  | 1745             | Company         |  | Rece                           | by:                        | $\overline{}$             | 10              |          |            | ID-1-6       |          | 1200   | Company Co                            |
| m om   |   | 13 1   | 1142             | Company         |  | 4                              | 10                         |                           | 7               |          |            |              | <u> </u> | 3 1745   | TABLE I                               |
| Relinquished by:   | Date/Time:  |  |                  | Company         | (                                      | Reg                            | ved by:                    |                           |                 |          |            | Date//       | ime: (   |  | Company                               |
| Relinquished by:   | Date/Time:  |  |                  | Company         |  | Rece                           | ived by:                   |                           |                 | _        |            | Date/1       | ime:     |  | Company                               |









# **Login Sample Receipt Checklist**

Client: New York State D.E.C. Job Number: 480-32023-1

Login Number: 32023 List Source: TestAmerica Buffalo

List Number: 1

Creator: Robitaille, Zach L

| oreator. Robitaine, Zaon E   |        |         |
|--|--------|---------|
| Question   | Answer | Comment |
| Radioactivity either was not measured or, if measured, is at or below background | True   |         |
| The cooler's custody seal, if present, is intact.                                | True   |         |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |         |
| Samples were received on ice.  | True   |         |
| Cooler Temperature is acceptable.  | True   |         |
| Cooler Temperature is recorded.  | True   |         |
| COC is present.  | True   |         |
| COC is filled out in ink and legible.  | True   |         |
| COC is filled out with all pertinent information.                                | True   |         |
| Is the Field Sampler's name present on COC?                                      | True   |         |
| There are no discrepancies between the sample IDs on the containers and the COC. | True   |         |
| Samples are received within Holding Time.  | True   |         |
| Sample containers have legible labels.   | True   |         |
| Containers are not broken or leaking.  | True   |         |
| Sample collection date/times are provided.                                       | True   |         |
| Appropriate sample containers are used.  | True   |         |
| Sample bottles are completely filled.  | True   |         |
| Sample Preservation Verified   | True   |         |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |         |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | True   |         |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True   |         |
| Multiphasic samples are not present.   | True   |         |
| Samples do not require splitting or compositing.                                 | True   |         |
| Sampling Company provided.   | True   | GES     |
| Samples received within 48 hours of sampling.                                    | True   |         |
| Samples requiring field filtration have been filtered in the field.              | N/A    |         |
| Chlorine Residual checked.   | N/A    |         |
|  |        |         |

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# **Login Sample Receipt Checklist**

Client: New York State D.E.C. Job Number: 480-32023-1

Login Number: 32024 List Source: TestAmerica Buffalo

List Number: 1

Creator: Robitaille, Zach L

| Question   | Answer | Comment |
|--|--------|---------|
| Radioactivity either was not measured or, if measured, is at or below background | True   |         |
| The cooler's custody seal, if present, is intact.                                | True   |         |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |         |
| Samples were received on ice.  | True   |         |
| Cooler Temperature is acceptable.  | True   |         |
| Cooler Temperature is recorded.  | True   |         |
| COC is present.  | True   |         |
| COC is filled out in ink and legible.  | True   |         |
| COC is filled out with all pertinent information.                                | True   |         |
| Is the Field Sampler's name present on COC?                                      | True   |         |
| There are no discrepancies between the sample IDs on the containers and the COC. | True   |         |
| Samples are received within Holding Time.  | True   |         |
| Sample containers have legible labels.   | True   |         |
| Containers are not broken or leaking.  | True   |         |
| Sample collection date/times are provided.                                       | True   |         |
| Appropriate sample containers are used.  | True   |         |
| Sample bottles are completely filled.  | True   |         |
| Sample Preservation Verified   | True   |         |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |         |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | N/A    |         |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True   |         |
| Multiphasic samples are not present.   | True   |         |
| Samples do not require splitting or compositing.                                 | True   |         |
| Sampling Company provided.   | True   | GES     |
| Samples received within 48 hours of sampling.                                    | True   |         |
| Samples requiring field filtration have been filtered in the field.              | N/A    |         |
| Chlorine Residual checked.   | N/A    |         |
|  |        |         |

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THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo 10 Hazelwood Drive Amherst, NY 14228-2298 Tel: (716)691-2600

TestAmerica Job ID: 480-33891-1

Client Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Sampling Event: Qtrly Post-Carbon Qtrly Pre-Carbon

#### For:

New York State D.E.C. 270 Michigan Avenue Buffalo, New York 14203

Attn: Mr. Glenn May

Authorized for release by: 3/20/2013 12:48:39 PM

Brian Fischer
Project Manager II

brian.fischer@testamericainc.com

·····LINKS ·······

Review your project results through

Total Access

**Have a Question?** 



Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Brian Fischer

3/20/2013 12:48:39 PM

Project Manager II

TestAmerica Job ID: 480-33891-1

TestAmerica Job ID: 480-33891-1

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

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# **Definitions/Glossary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-33891-1

#### **Qualifiers**

#### **Metals**

| Qualifier | Qualifier Description  |
|-----------|--|
| J         | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

#### **General Chemistry**

| Qualifier | Qualifier Description  |
|-----------|--|
| HF        | Field parameter with a holding time of 15 minutes  |
| J         | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

#### **Glossary**

ML

ND PQL

QC

RL

RER

| Abbreviation   | These commonly used abbreviations may or may not be present in this report.                                 |
|----------------|---|
| п              | Listed under the "D" column to designate that the result is reported on a dry weight basis                  |
| %R             | Percent Recovery  |
| CNF            | Contains no Free Liquid   |
| DER            | Duplicate error ratio (normalized absolute difference)  |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC            | Decision level concentration  |
| MDA            | Minimum detectable activity   |
| EDL            | Estimated Detection Limit   |
| MDC            | Minimum detectable concentration  |
| MDI            | Method Detection Limit  |

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)

**Quality Control** 

Relative error ratio

Minimum Level (Dioxin)

**Practical Quantitation Limit** 

Not detected at the reporting limit (or MDL or EDL if shown)

Reporting Limit or Requested Limit (Radiochemistry)

TEQ Toxicity Equivalent Pactor (Dioxin)

TEQ Toxicity Equivalent Quotient (Dioxin)

TestAmerica Buffalo

#### **Case Narrative**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-33891-1

Job ID: 480-33891-1

**Laboratory: TestAmerica Buffalo** 

Narrative

Job Narrative 480-33891-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 3/6/2013 1:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 4.1° C and 4.2° C.

#### GC/MS VOA

Method(s) 8260B: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-33897-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

#### GC/MS Semi VOA

No analytical or quality issues were noted.

#### Ion Chromatography

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-33897-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

#### **GC VOA**

Method(s) 8021B: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-33897-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

#### GC Semi VOA

No analytical or quality issues were noted.

#### Metals

No analytical or quality issues were noted.

#### **General Chemistry**

Method(s) SM 5210B: For batch # 106138, the dilution water D.O. depletion was greater than 0.2 mg/L but less than the reporting limit of 2.0 mg/L. The associated sample results are reported. (USB 480-106138/1)

Method(s) SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample(s) has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Post-Carbon (480-33891-1)

No other analytical or quality issues were noted.

#### Organic Prep

No analytical or quality issues were noted.

4

**D** 

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9

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

**Client Sample ID: Post-Carbon** 

Date Collected: 03/06/13 13:15 Date Received: 03/06/13 13:40 Lab Sample ID: 480-33891-1

Matrix: Wastewater

| Analyte                     | Result | Qualifier | RL  | MDL  |      | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| 1,1,1-Trichloroethane       | ND     |           | 1.0 | 0.82 | ug/L |   |          | 03/13/13 02:03 | 1       |
| 1,1,2,2-Tetrachloroethane   | ND     |           | 1.0 | 0.21 | ug/L |   |          | 03/13/13 02:03 | 1       |
| 1,1,2-Trichloroethane       | ND     |           | 1.0 | 0.23 | ug/L |   |          | 03/13/13 02:03 | 1       |
| 1,1-Dichloroethane          | ND     |           | 1.0 | 0.38 | ug/L |   |          | 03/13/13 02:03 | 1       |
| 1,1-Dichloroethene          | ND     |           | 1.0 | 0.29 | ug/L |   |          | 03/13/13 02:03 | 1       |
| 1,2-Dichloroethane          | ND     |           | 1.0 | 0.21 | ug/L |   |          | 03/13/13 02:03 | 1       |
| 1,2-Dichloroethene, Total   | ND     |           | 2.0 | 0.70 | ug/L |   |          | 03/13/13 02:03 | 1       |
| 1,2-Dichloropropane         | ND     |           | 1.0 | 0.72 | ug/L |   |          | 03/13/13 02:03 | 1       |
| 2-Hexanone                  | ND     |           | 5.0 | 1.2  | ug/L |   |          | 03/13/13 02:03 | 1       |
| 2-Butanone (MEK)            | ND     |           | 10  | 1.3  | ug/L |   |          | 03/13/13 02:03 | 1       |
| 4-Methyl-2-pentanone (MIBK) | ND     |           | 5.0 | 2.1  | ug/L |   |          | 03/13/13 02:03 | 1       |
| Acetone                     | ND     |           | 10  | 3.0  | ug/L |   |          | 03/13/13 02:03 | 1       |
| Benzene                     | 2.0    |           | 1.0 | 0.41 | ug/L |   |          | 03/13/13 02:03 | 1       |
| Bromodichloromethane        | ND     |           | 1.0 | 0.39 | ug/L |   |          | 03/13/13 02:03 | 1       |
| Bromoform                   | ND     |           | 1.0 | 0.26 | ug/L |   |          | 03/13/13 02:03 | 1       |
| Bromomethane                | ND     |           | 1.0 | 0.69 | ug/L |   |          | 03/13/13 02:03 | 1       |
| Carbon disulfide            | ND     |           | 1.0 | 0.19 | ug/L |   |          | 03/13/13 02:03 | 1       |
| Carbon tetrachloride        | ND     |           | 1.0 | 0.27 | ug/L |   |          | 03/13/13 02:03 | 1       |
| Chlorobenzene               | ND     |           | 1.0 | 0.75 | ug/L |   |          | 03/13/13 02:03 | 1       |
| Dibromochloromethane        | ND     |           | 1.0 | 0.32 | ug/L |   |          | 03/13/13 02:03 | 1       |
| Chloroethane                | ND     |           | 1.0 | 0.32 | ug/L |   |          | 03/13/13 02:03 | 1       |
| Chloroform                  | 14     |           | 1.0 | 0.34 | ug/L |   |          | 03/13/13 02:03 | 1       |
| Chloromethane               | ND     |           | 1.0 | 0.35 | ug/L |   |          | 03/13/13 02:03 | 1       |
| cis-1,3-Dichloropropene     | ND     |           | 1.0 | 0.36 | ug/L |   |          | 03/13/13 02:03 | 1       |
| Ethylbenzene                | ND     |           | 1.0 | 0.74 | ug/L |   |          | 03/13/13 02:03 | 1       |
| Methylene Chloride          | ND     |           | 1.0 | 0.44 | ug/L |   |          | 03/13/13 02:03 | 1       |
| Styrene                     | ND     |           | 1.0 | 0.73 | ug/L |   |          | 03/13/13 02:03 | 1       |
| Tetrachloroethene           | ND     |           | 1.0 | 0.36 | ug/L |   |          | 03/13/13 02:03 | 1       |
| Toluene                     | ND     |           | 1.0 | 0.51 | ug/L |   |          | 03/13/13 02:03 | 1       |
| trans-1,3-Dichloropropene   | ND     |           | 1.0 | 0.37 | ug/L |   |          | 03/13/13 02:03 | 1       |
| Trichloroethene             | ND     |           | 1.0 | 0.46 | ug/L |   |          | 03/13/13 02:03 | 1       |
| Vinyl chloride              | ND     |           | 1.0 | 0.90 |      |   |          | 03/13/13 02:03 | 1       |
| Vinyl acetate               | ND     |           | 5.0 |      | ug/L |   |          | 03/13/13 02:03 | 1       |
| Xylenes, Total              | ND     |           | 2.0 | 0.66 | ua/L |   |          | 03/13/13 02:03 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 103       |           | 66 - 137 |          | 03/13/13 02:03 | 1       |
| Toluene-d8 (Surr)            | 93        |           | 71 - 126 |          | 03/13/13 02:03 | 1       |
| 4-Bromofluorobenzene (Surr)  | 89        |           | 73 - 120 |          | 03/13/13 02:03 | 1       |

| Method: 8270C - Semivolatile | e Organic Compoun | ds (GC/MS) |
|------------------------------|-------------------|------------|
|------------------------------|-------------------|------------|

| Analyte              | Result | Qualifier | RL  | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
|----------------------|--------|-----------|-----|------|------|---|----------------|----------------|---------|
| 2-Methylnaphthalene  | ND     |           | 4.7 | 0.57 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Acenaphthene         | ND     |           | 4.7 | 0.39 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Acenaphthylene       | ND     |           | 4.7 | 0.36 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Anthracene           | ND     |           | 4.7 | 0.26 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Benzo[a]anthracene   | ND     |           | 4.7 | 0.34 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Benzo[a]pyrene       | ND     |           | 4.7 | 0.44 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Benzo[b]fluoranthene | ND     |           | 4.7 | 0.32 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Benzo[g,h,i]perylene | ND     |           | 4.7 | 0.33 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
|                      |        |           |     |      |      |   |                |                |         |

TestAmerica Buffalo

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Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

**Client Sample ID: Post-Carbon** 

Date Collected: 03/06/13 13:15 Date Received: 03/06/13 13:40 Lab Sample ID: 480-33891-1

Matrix: Wastewater

| Method: 8270C - Semivolatile | e Organic Compou | nds (GC/M | S) (Continued) |      |      |   |                |                |         |
|------------------------------|------------------|-----------|----------------|------|------|---|----------------|----------------|---------|
| Analyte                      | Result           | Qualifier | RL             | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Benzo[k]fluoranthene         | ND               |           | 4.7            | 0.69 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Biphenyl                     | ND               |           | 4.7            | 0.62 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Bis(2-ethylhexyl) phthalate  | ND               |           | 4.7            | 1.7  | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Carbazole                    | ND               |           | 4.7            | 0.28 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Chrysene                     | ND               |           | 4.7            | 0.31 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Dibenz(a,h)anthracene        | ND               |           | 4.7            | 0.40 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Dibenzofuran                 | ND               |           | 9.4            | 0.48 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Fluoranthene                 | ND               |           | 4.7            | 0.38 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Fluorene                     | ND               |           | 4.7            | 0.34 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Indeno[1,2,3-cd]pyrene       | ND               |           | 4.7            | 0.44 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Naphthalene                  | ND               |           | 4.7            | 0.72 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Pentachlorophenol            | ND               |           | 9.4            | 2.1  | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Phenanthrene                 | ND               |           | 4.7            | 0.42 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Phenol                       | ND               |           | 4.7            | 0.37 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Pyrene                       | ND               |           | 4.7            | 0.32 | ug/L |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Surrogate                    | %Recovery        | Qualifier | Limits         |      |      |   | Prepared       | Analyzed       | Dil Fac |
| 2,4,6-Tribromophenol         | 69               |           | 52 - 132       |      |      |   | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
|                              |                  |           |                |      |      |   |                |                |         |

| Surrogate            | %Recovery | Qualifier | Limits   | Prepared       | Analyzed       | Dil Fac |
|----------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2,4,6-Tribromophenol | 69        |           | 52 - 132 | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| 2-Fluorobiphenyl     | 74        |           | 48 - 120 | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| 2-Fluorophenol       | 31        |           | 20 - 120 | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Nitrobenzene-d5      | 60        |           | 46 - 120 | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| p-Terphenyl-d14      | 74        |           | 67 - 150 | 03/07/13 07:40 | 03/13/13 14:54 | 1       |
| Phenol-d5            | 22        |           | 16 - 120 | 03/07/13 07:40 | 03/13/13 14:54 | 1       |

| Analyte                 | Result | Qualifier | RL   | MDL   | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------|--------|-----------|------|-------|------|---|----------|----------------|---------|
| 1,2,4-Trimethylbenzene  | ND     |           | 0.20 | 0.035 | ug/L |   |          | 03/07/13 13:43 | 1       |
| 1,3,5-Trimethylbenzene  | ND     |           | 0.20 | 0.15  | ug/L |   |          | 03/07/13 13:43 | 1       |
| Benzene                 | 2.5    |           | 0.20 | 0.023 | ug/L |   |          | 03/07/13 13:43 | 1       |
| Ethylbenzene            | ND     |           | 0.20 | 0.029 | ug/L |   |          | 03/07/13 13:43 | 1       |
| Isopropylbenzene        | ND     |           | 0.20 | 0.027 | ug/L |   |          | 03/07/13 13:43 | 1       |
| Methyl tert-butyl ether | ND     |           | 0.40 | 0.044 | ug/L |   |          | 03/07/13 13:43 | 1       |
| m,p-Xylene              | ND     |           | 0.40 | 0.054 | ug/L |   |          | 03/07/13 13:43 | 1       |
| n-Butylbenzene          | ND     |           | 0.20 | 0.031 | ug/L |   |          | 03/07/13 13:43 | 1       |
| n-Propylbenzene         | ND     |           | 0.20 | 0.13  | ug/L |   |          | 03/07/13 13:43 | 1       |
| o-Xylene                | ND     |           | 0.20 | 0.027 | ug/L |   |          | 03/07/13 13:43 | 1       |
| p-Cymene                | ND     |           | 0.20 | 0.030 | ug/L |   |          | 03/07/13 13:43 | 1       |
| sec-Butylbenzene        | ND     |           | 0.20 | 0.020 | ug/L |   |          | 03/07/13 13:43 | 1       |
| Toluene                 | ND     |           | 0.20 | 0.036 | ug/L |   |          | 03/07/13 13:43 | 1       |
| Xylenes, Total          | ND     |           | 0.60 | 0.054 | ua/L |   |          | 03/07/13 13:43 | 1       |

| Analyte               | Result Qualifier | RL    | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
|-----------------------|------------------|-------|--------|------|---|----------------|----------------|---------|
| Aldrin                | ND ND            | 0.047 | 0.0062 | ug/L |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |
| alpha-BHC             | ND               | 0.047 | 0.0062 | ug/L |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |
| beta-BHC              | ND               | 0.047 | 0.023  | ug/L |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |
| delta-BHC             | ND               | 0.047 | 0.0094 | ug/L |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |
| gamma-BHC (Lindane)   | ND               | 0.047 | 0.0057 | ug/L |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |
| Chlordane (technical) | ND               | 0.47  | 0.027  | ug/L |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |
| 4,4'-DDD              | ND               | 0.047 | 0.0087 | ug/L |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |

TestAmerica Buffalo

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Lab Sample ID: 480-33891-1

03/07/13 10:45

03/07/13 17:44

TestAmerica Job ID: 480-33891-1

**Matrix: Wastewater** 

# **Client Sample ID: Post-Carbon**

Date Collected: 03/06/13 13:15 Date Received: 03/06/13 13:40

Zinc

| Analyte                           | Result    | Qualifier | RL       | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
|-----------------------------------|-----------|-----------|----------|--------|------|---|----------------|----------------|---------|
| 4,4'-DDE                          | ND        |           | 0.047    | 0.011  | ug/L |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |
| 4,4'-DDT                          | ND        |           | 0.047    | 0.010  | ug/L |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |
| Dieldrin                          | ND        |           | 0.047    | 0.0092 | ug/L |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |
| Endosulfan I                      | ND        |           | 0.047    | 0.010  | ug/L |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |
| Endosulfan II                     | ND        |           | 0.047    | 0.011  | ug/L |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |
| Endosulfan sulfate                | ND        |           | 0.047    | 0.015  | ug/L |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |
| Endrin                            | ND        |           | 0.047    | 0.013  | ug/L |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |
| Endrin aldehyde                   | ND        |           | 0.047    | 0.015  | ug/L |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |
| Heptachlor                        | ND        |           | 0.047    | 0.0080 | ug/L |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |
| Heptachlor epoxide                | ND        |           | 0.047    | 0.0050 | ug/L |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |
| Toxaphene                         | ND        |           | 0.47     | 0.11   | ug/L |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |
| Surrogate                         | %Recovery | Qualifier | Limits   |        |      |   | Prepared       | Analyzed       | Dil Fac |
| DCB Decachlorobiphenyl            | 63        |           | 15 - 125 |        |      |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |
| Tetrachloro-m-xylene              | 83        |           | 36 - 121 |        |      |   | 03/08/13 07:19 | 03/08/13 14:31 | 1       |
| -<br>Method: 200.7 Rev 4.4 - Meta | ils (ICP) |           |          |        |      |   |                |                |         |
| Analyte                           | Result    | Qualifier | RL       | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Arsenic                           | ND        |           | 10.0     | 5.6    | ug/L |   | 03/07/13 10:45 | 03/07/13 17:44 | 1       |
| Iron                              | 163       |           | 50.0     | 19.3   | ug/L |   | 03/07/13 10:45 | 03/07/13 17:44 | 1       |
| Manganese                         | 136       |           | 3.0      | 0.40   | ug/L |   | 03/07/13 10:45 | 03/07/13 17:44 | 1       |

| General Chemistry             |        |           |       |        |      |   |                |                |         |
|-------------------------------|--------|-----------|-------|--------|------|---|----------------|----------------|---------|
| Analyte                       | Result | Qualifier | RL    | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Oil & Grease                  | 3.9    | J         | 4.8   | 1.3    | mg/L |   | 03/18/13 00:36 | 03/18/13 01:28 | 1       |
| Cyanide, Total                | 0.32   |           | 0.010 | 0.0050 | mg/L |   | 03/12/13 22:26 | 03/14/13 17:45 | 1       |
| Phenolics, Total Recoverable  | ND     |           | 0.010 | 0.0050 | mg/L |   | 03/13/13 15:58 | 03/16/13 12:11 | 1       |
| <b>Total Dissolved Solids</b> | 863    |           | 10.0  | 4.0    | mg/L |   |                | 03/06/13 22:21 | 1       |
| Biochemical Oxygen Demand     | ND     |           | 2.0   | 2.0    | mg/L |   |                | 03/06/13 17:18 | 1       |
| Analyte                       | Result | Qualifier | RL    | RL     | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Total Suspended Solids        | ND     |           | 4.0   | 4.0    | mg/L |   |                | 03/07/13 15:34 | 1       |
| pH                            | 7.85   | HF        | 0.100 | 0.100  | SU   |   |                | 03/06/13 19:49 | 1       |

10.0

1.5 ug/L

4.0 J

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-33891-1

Lab Sample ID: 480-33897-1

Matrix: Wastewater

Client Sample ID: Pre-Carbon Date Collected: 03/06/13 13:25

Date Received: 03/06/13 13:40

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fa |
|------------------------------|-----------|-----------|----------|------|------|---|----------|----------------|--------|
| 1,1,1-Trichloroethane        | ND        |           | 5.0      | 4.1  | ug/L |   |          | 03/08/13 19:58 |        |
| 1,1,2,2-Tetrachloroethane    | ND        |           | 5.0      | 1.1  | ug/L |   |          | 03/08/13 19:58 | :      |
| 1,1,2-Trichloroethane        | ND        |           | 5.0      | 1.2  | ug/L |   |          | 03/08/13 19:58 |        |
| 1,1-Dichloroethane           | ND        |           | 5.0      | 1.9  | ug/L |   |          | 03/08/13 19:58 |        |
| 1,1-Dichloroethene           | ND        |           | 5.0      | 1.5  | ug/L |   |          | 03/08/13 19:58 |        |
| 1,2-Dichloroethane           | ND        |           | 5.0      | 1.1  | ug/L |   |          | 03/08/13 19:58 | :      |
| 1,2-Dichloroethene, Total    | ND        |           | 10       | 3.5  | ug/L |   |          | 03/08/13 19:58 |        |
| 1,2-Dichloropropane          | ND        |           | 5.0      | 3.6  | ug/L |   |          | 03/08/13 19:58 | :      |
| 2-Hexanone                   | ND        |           | 25       | 6.2  | ug/L |   |          | 03/08/13 19:58 | :      |
| 2-Butanone (MEK)             | ND        |           | 50       | 6.6  | ug/L |   |          | 03/08/13 19:58 |        |
| 4-Methyl-2-pentanone (MIBK)  | ND        |           | 25       | 11   | ug/L |   |          | 03/08/13 19:58 |        |
| Acetone                      | ND        |           | 50       | 15   | ug/L |   |          | 03/08/13 19:58 |        |
| Bromodichloromethane         | ND        |           | 5.0      | 2.0  | ug/L |   |          | 03/08/13 19:58 |        |
| Bromoform                    | ND        |           | 5.0      | 1.3  | ug/L |   |          | 03/08/13 19:58 |        |
| Bromomethane                 | ND        |           | 5.0      | 3.5  | ug/L |   |          | 03/08/13 19:58 |        |
| Carbon disulfide             | ND        |           | 5.0      | 0.95 | ug/L |   |          | 03/08/13 19:58 |        |
| Carbon tetrachloride         | ND        |           | 5.0      | 1.4  | ug/L |   |          | 03/08/13 19:58 |        |
| Chlorobenzene                | ND        |           | 5.0      | 3.8  | ug/L |   |          | 03/08/13 19:58 | :      |
| Dibromochloromethane         | ND        |           | 5.0      | 1.6  | ug/L |   |          | 03/08/13 19:58 |        |
| Chloroethane                 | ND        |           | 5.0      | 1.6  | ug/L |   |          | 03/08/13 19:58 |        |
| Chloroform                   | ND        |           | 5.0      | 1.7  | ug/L |   |          | 03/08/13 19:58 |        |
| Chloromethane                | ND        |           | 5.0      | 1.8  | ug/L |   |          | 03/08/13 19:58 |        |
| cis-1,3-Dichloropropene      | ND        |           | 5.0      | 1.8  | ug/L |   |          | 03/08/13 19:58 |        |
| Ethylbenzene                 | 190       |           | 5.0      | 3.7  | ug/L |   |          | 03/08/13 19:58 |        |
| Methylene Chloride           | ND        |           | 5.0      | 2.2  | ug/L |   |          | 03/08/13 19:58 |        |
| Styrene                      | 90        |           | 5.0      | 3.7  | ug/L |   |          | 03/08/13 19:58 |        |
| Tetrachloroethene            | ND        |           | 5.0      | 1.8  | ug/L |   |          | 03/08/13 19:58 |        |
| trans-1,3-Dichloropropene    | ND        |           | 5.0      | 1.9  | ug/L |   |          | 03/08/13 19:58 |        |
| Trichloroethene              | ND        |           | 5.0      | 2.3  | ug/L |   |          | 03/08/13 19:58 |        |
| Vinyl chloride               | ND        |           | 5.0      | 4.5  | ug/L |   |          | 03/08/13 19:58 |        |
| Vinyl acetate                | ND        |           | 25       | 4.3  | ug/L |   |          | 03/08/13 19:58 |        |
| Xylenes, Total               | 220       |           | 10       |      | ug/L |   |          | 03/08/13 19:58 |        |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fa |
| 1,2-Dichloroethane-d4 (Surr) | 93        |           | 66 - 137 |      |      | - |          | 03/08/13 19:58 |        |
| Toluene-d8 (Surr)            | 95        |           | 71 - 126 |      |      |   |          | 03/08/13 19:58 |        |
| 4-Bromofluorobenzene (Surr)  | 94        |           | 73 - 120 |      |      |   |          | 03/08/13 19:58 |        |

| Method: 8260B - Volatile Orga | nic Compounds | (GC/MS) - D | L        |     |      |   |          |                |         |
|-------------------------------|---------------|-------------|----------|-----|------|---|----------|----------------|---------|
| Analyte                       | Result        | Qualifier   | RL       | MDL | Unit | D | Prepared | Analyzed       | Dil Fac |
| Benzene                       | 3700          |             | 80       | 33  | ug/L |   |          | 03/09/13 18:36 | 80      |
| Toluene                       | 1000          |             | 80       | 41  | ug/L |   |          | 03/09/13 18:36 | 80      |
| Surrogate                     | %Recovery     | Qualifier   | Limits   |     |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr)  | 97            |             | 66 - 137 |     |      | = |          | 03/09/13 18:36 | 80      |
| Toluene-d8 (Surr)             | 105           |             | 71 - 126 |     |      |   |          | 03/09/13 18:36 | 80      |
| 4-Bromofluorobenzene (Surr)   | 108           |             | 73 - 120 |     |      |   |          | 03/09/13 18:36 | 80      |

TestAmerica Buffalo

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Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-33891-1

**Client Sample ID: Pre-Carbon** 

Date Collected: 03/06/13 13:25 Date Received: 03/06/13 13:40 Lab Sample ID: 480-33897-1

**Matrix: Wastewater** 

| Analyte                 | Result Qu | ualifier R | _ MDL | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------|-----------|------------|-------|------|---|----------|----------------|---------|
| 1,2,4-Trimethylbenzene  | 18        | 0.2        | 0.035 | ug/L |   |          | 03/07/13 12:08 | 1       |
| 1,3,5-Trimethylbenzene  | 6.9       | 0.2        | 0.15  | ug/L |   |          | 03/07/13 12:08 | 1       |
| Isopropylbenzene        | 0.86      | 0.2        | 0.027 | ug/L |   |          | 03/07/13 12:08 | 1       |
| Methyl tert-butyl ether | ND        | 0.4        | 0.044 | ug/L |   |          | 03/07/13 12:08 | 1       |
| n-Butylbenzene          | ND        | 0.2        | 0.031 | ug/L |   |          | 03/07/13 12:08 | 1       |
| n-Propylbenzene         | ND        | 0.2        | 0.13  | ug/L |   |          | 03/07/13 12:08 | 1       |
| p-Cymene                | ND        | 0.2        | 0.030 | ug/L |   |          | 03/07/13 12:08 | 1       |
| sec-Butylbenzene        | ND        | 0.2        | 0.020 | ug/L |   |          | 03/07/13 12:08 | 1       |
| Xylenes, Total          | 360       | 0.6        | 0.054 | ug/L |   |          | 03/07/13 12:08 | 1       |

| Analyte      | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed       | Dil Fac |
|--------------|--------|-----------|----|-----|------|---|----------|----------------|---------|
| Benzene      | 2600   |           | 10 | 1.2 | ug/L |   |          | 03/07/13 13:09 | 50      |
| Ethylbenzene | 170    |           | 10 | 1.4 | ug/L |   |          | 03/07/13 13:09 | 50      |
| m,p-Xylene   | 130    |           | 20 | 2.7 | ug/L |   |          | 03/07/13 13:09 | 50      |
| o-Xylene     | 72     |           | 10 | 1.4 | ug/L |   |          | 03/07/13 13:09 | 50      |
| Toluene      | 660    |           | 10 | 1.8 | ug/L |   |          | 03/07/13 13:09 | 50      |

| Method: 200.7 Rev 4.4 - M | letals (ICP) |           |      |      |      |   |                |                |         |
|---------------------------|--------------|-----------|------|------|------|---|----------------|----------------|---------|
| Analyte                   | Result       | Qualifier | RL   | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Calcium                   | 146000       |           | 500  | 100  | ug/L |   | 03/07/13 10:45 | 03/07/13 17:46 | 1       |
| Iron                      | 674          |           | 50.0 | 19.3 | ug/L |   | 03/07/13 10:45 | 03/07/13 17:46 | 1       |
| Magnesium                 | 85000        |           | 200  | 43.4 | ug/L |   | 03/07/13 10:45 | 03/07/13 17:46 | 1       |
| Potassium                 | 4180         |           | 500  | 100  | ug/L |   | 03/07/13 10:45 | 03/07/13 17:46 | 1       |
| Sodium                    | 71000        |           | 1000 | 324  | ug/L |   | 03/07/13 10:45 | 03/07/13 17:46 | 1       |
| <u> </u>                  |              |           |      |      |      |   |                |                |         |

| General Chemistry |        |           |     |      |      |   |          |                |         |
|-------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| Analyte           | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
| Chloride          | 109    |           | 1.0 | 0.56 | mg/L |   |          | 03/14/13 04:12 | 2       |
| Sulfate           | 161    |           | 4.0 | 0.70 | mg/L |   |          | 03/14/13 04:12 | 2       |
| Alkalinity, Total | 572    |           | 100 | 40.0 | mg/L |   |          | 03/11/13 16:42 | 10      |

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Lab Sample ID: 480-33891-1

**Matrix: Wastewater** 

# **Client Sample ID: Post-Carbon**

Date Collected: 03/06/13 13:15 Date Received: 03/06/13 13:40

|           | Batch    | Batch          |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|----------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method         | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8260B          |     |          | 107062 | 03/13/13 02:03 | JMB     | TAL BUF |
| Total/NA  | Prep     | 3510C          |     |          | 106181 | 03/07/13 07:40 | MZ      | TAL BUF |
| Total/NA  | Analysis | 8270C          |     | 1        | 107133 | 03/13/13 14:54 | RMM     | TAL BUF |
| Total/NA  | Analysis | 8021B          |     | 1        | 106180 | 03/07/13 13:43 | DB      | TAL BUF |
| Total/NA  | Prep     | 3510C          |     |          | 106430 | 03/08/13 07:19 | DE      | TAL BUF |
| Total/NA  | Analysis | 608            |     | 1        | 106478 | 03/08/13 14:31 | LW      | TAL BUF |
| Total/NA  | Prep     | 200.7          |     |          | 106189 | 03/07/13 10:45 | JM      | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4  |     | 1        | 106467 | 03/07/13 17:44 | LH      | TAL BUF |
| Total/NA  | Analysis | SM 5210B       |     | 1        | 106138 | 03/06/13 17:18 | KS      | TAL BUF |
| Total/NA  | Analysis | SM 4500 H+ B   |     | 1        | 106150 | 03/06/13 19:49 | KS      | TAL BUF |
| Total/NA  | Analysis | SM 2540C       |     | 1        | 106153 | 03/06/13 22:21 | JB      | TAL BUF |
| Total/NA  | Analysis | SM 2540D       |     | 1        | 106347 | 03/07/13 15:34 | JB      | TAL BUF |
| Total/NA  | Prep     | Distill/CN     |     |          | 107070 | 03/12/13 22:26 | JB      | TAL BUF |
| Total/NA  | Analysis | 335.4          |     | 1        | 107480 | 03/14/13 17:45 | NH      | TAL BUF |
| Total/NA  | Prep     | Distill/Phenol |     |          | 107198 | 03/13/13 15:58 | KS      | TAL BUF |
| Total/NA  | Analysis | 420.4          |     | 1        | 107807 | 03/16/13 12:11 | EGN     | TAL BUF |
| Total/NA  | Prep     | 1664A          |     |          | 107839 | 03/18/13 00:36 | LAW     | TAL BUF |
| Total/NA  | Analysis | 1664A          |     | 1        | 107842 | 03/18/13 01:28 | LAW     | TAL BUF |

Client Sample ID: Pre-Carbon Lab Sample ID: 480-33897-1 Date Collected: 03/06/13 13:25 **Matrix: Wastewater** Date Received: 03/06/13 13:40

|           | Batch    | Batch         |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|---------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method        | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8260B         |     | 5        | 106497 | 03/08/13 19:58 | TRF     | TAL BUF |
| Total/NA  | Analysis | 8260B         | DL  | 80       | 106639 | 03/09/13 18:36 | JMB     | TAL BUF |
| Total/NA  | Analysis | 8021B         |     | 1        | 106180 | 03/07/13 12:08 | DB      | TAL BUF |
| Total/NA  | Analysis | 8021B         | DL  | 50       | 106180 | 03/07/13 13:09 | DB      | TAL BUF |
| Total/NA  | Prep     | 200.7         |     |          | 106189 | 03/07/13 10:45 | JM      | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |     | 1        | 106467 | 03/07/13 17:46 | LH      | TAL BUF |
| Total/NA  | Analysis | 310.2         |     | 10       | 106876 | 03/11/13 16:42 | NH      | TAL BUF |
| Total/NA  | Analysis | 300.0         |     | 2        | 107167 | 03/14/13 04:12 | KAC     | TAL BUF |

#### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# **Certification Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-33891-1

#### Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority         | Program       | EPA Region | Certification ID | Expiration Date |
|-------------------|---------------|------------|------------------|-----------------|
| Arkansas DEQ      | State Program | 6          | 88-0686          | 07-06-13        |
| California        | NELAP         | 9          | 1169CA           | 09-30-13        |
| Connecticut       | State Program | 1          | PH-0568          | 09-30-14        |
| Florida           | NELAP         | 4          | E87672           | 06-30-13        |
| Georgia           | State Program | 4          | N/A              | 03-31-13        |
| Georgia           | State Program | 4          | 956              | 06-30-13        |
| Georgia           | State Program | 4          | 956              | 06-30-13        |
| Illinois          | NELAP         | 5          | 200003           | 09-30-13        |
| owa               | State Program | 7          | 374              | 03-01-13        |
| Kansas            | NELAP         | 7          | E-10187          | 01-31-14        |
| Kentucky          | State Program | 4          | 90029            | 12-31-13        |
| Kentucky (UST)    | State Program | 4          | 30               | 04-01-13        |
| Louisiana         | NELAP         | 6          | 02031            | 06-30-13        |
| Maine             | State Program | 1          | NY00044          | 12-04-13        |
| Maryland          | State Program | 3          | 294              | 03-31-13        |
| Massachusetts     | State Program | 1          | M-NY044          | 06-30-13        |
| Michigan          | State Program | 5          | 9937             | 04-01-13        |
| Minnesota         | NELAP         | 5          | 036-999-337      | 12-31-13        |
| New Hampshire     | NELAP         | 1          | 2973             | 09-11-13        |
| New Hampshire     | NELAP         | 1          | 2337             | 11-17-13        |
| New Jersey        | NELAP         | 2          | NY455            | 06-30-13        |
| New York          | NELAP         | 2          | 10026            | 03-31-13        |
| North Dakota      | State Program | 8          | R-176            | 03-31-13        |
| Oklahoma          | State Program | 6          | 9421             | 08-31-13        |
| Oregon            | NELAP         | 10         | NY200003         | 06-09-13        |
| Pennsylvania      | NELAP         | 3          | 68-00281         | 07-31-13        |
| Rhode Island      | State Program | 1          | LAO00328         | 12-31-13        |
| Tennessee         | State Program | 4          | TN02970          | 04-01-13        |
| Texas             | NELAP         | 6          | T104704412-11-2  | 07-31-13        |
| USDA              | Federal       |            | P330-11-00386    | 11-22-14        |
| Virginia          | NELAP         | 3          | 460185           | 09-14-13        |
| Washington        | State Program | 10         | C784             | 02-10-14        |
| West Virginia DEP | State Program | 3          | 252              | 09-30-13        |
| Wisconsin         | State Program | 5          | 998310390        | 08-31-13        |

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#### **Method Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-33891-1

| lethod       | Method Description                     | Protocol  | Laboratory |
|--------------|--|-----------|------------|
| 260B         | Volatile Organic Compounds (GC/MS)     | SW846     | TAL BUF    |
| 270C         | Semivolatile Organic Compounds (GC/MS) | SW846     | TAL BUF    |
| 021B         | Volatile Organic Compounds (GC)        | SW846     | TAL BUF    |
| 08           | Organochlorine Pesticides in Water     | 40CFR136A | TAL BUF    |
| 00.7 Rev 4.4 | Metals (ICP)                           | EPA       | TAL BUF    |
| 664A         | HEM and SGT-HEM                        | 1664A     | TAL BUF    |
| 00.0         | Anions, Ion Chromatography             | MCAWW     | TAL BUF    |
| 10.2         | Alkalinity                             | MCAWW     | TAL BUF    |
| 35.4         | Cyanide, Total                         | MCAWW     | TAL BUF    |
| 20.4         | Phenolics, Total Recoverable           | MCAWW     | TAL BUF    |
| M 2540C      | Solids, Total Dissolved (TDS)          | SM        | TAL BUF    |
| M 2540D      | Solids, Total Suspended (TSS)          | SM        | TAL BUF    |
| M 4500 H+ B  | pH                                     | SM        | TAL BUF    |
| M 5210B      | BOD, 5-Day                             | SM        | TAL BUF    |

#### Protocol References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TestAmerica Buffalo

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# **Sample Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-33891-1

| Lab Sample ID | Client Sample ID | Matrix     | Collected      | Received       |
|---------------|------------------|------------|----------------|----------------|
| 480-33891-1   | Post-Carbon      | Wastewater | 03/06/13 13:15 | 03/06/13 13:40 |
| 480-33897-1   | Pre-Carbon       | Wastewater | 03/06/13 13:25 | 03/06/13 13:40 |

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| 10 Hazelwood Drive<br>Amherst, NY 14228-2298   |                       |              | С             | hain o                   | f Cı     | ıst                        | od                     | y R                       | ec(                 | ord   |                                 |                               |                                  |                             |                      |              |               |                                   | Merico   |
|--|-----------------------|--------------|---------------|--------------------------|----------|----------------------------|------------------------|---------------------------|---------------------|---|---------------------------------|-------------------------------|----------------------------------|-----------------------------|----------------------|--------------|---------------|-----------------------------------|--|
| Phone (716) 691-2600 Fax (716) 691-7991  | Sampler: L V          | 2 . 1        |               | Lab P                    |          |                            | _                      | _                         | _                   |   | _                               | Cami                          | er Tra                           | cking                       | No(s):               | _            |               | COC No:                           |  |
| Client Information   |                       | leisil       | <u> </u>      | Fisch                    | er, Bria | an                         |                        |                           |                     |   |                                 |                               |                                  |                             |                      |              |               | 480-8774-1178.1                   |  |
| Sient Contact:   | Phone:                |              |               | E-Mai                    |          |                            |                        |                           |                     |   |                                 | 1                             |                                  |                             |                      |              |               | Page:                             |  |
| homas Palmer   |                       |              |               | onan                     | .fische  | (Qtes                      | stame                  | encainc                   | .com                | n   | _                               | _                             | _                                | _                           |                      | _            |               | Page 1 of 1                       |  |
| company:<br>Groundwater & Environmental Services Inc   |                       |              |               |                          |          |                            |                        |                           | Ana                 | alysis  | Rec                             | lues                          | ted                              |                             |                      |              |               |                                   |  |
| ddress:  | Due Date Reques       | ted:         |               |                          | 277      |                            |                        |                           |                     | Ť   |                                 |                               |                                  |                             |                      |              |               | Preservation Cod                  | ies:   |
| 95 Aero Drive Suite 3  |                       |              |               |                          |          |                            |                        |                           | -                   |   | 1                               | l                             | ı                                |                             |                      |              |               | A-HCL                             | M - Hexane   |
| Xty:   | TAT Requested (d      | iays):       |               |                          |          |                            | 1                      | ' I                       |                     | ĺ   | ĺ                               | l                             | 1                                |                             |                      |              |               | B - NaOH                          | N - None   |
| Cheektowaga<br>State, Zip:   | <b>-</b>              | ぴ            |               |                          |          |                            | 1                      |                           | -                   |   | 1                               |                               |                                  |                             |                      |              |               | C - Zn Acetate<br>D - Nitric Acid | O - AsNaO2<br>P - Na2O4S   |
| м. 14225   | )                     | 1.5          |               |                          |          | ы                          |                        |                           | -                   | - 1   | 1                               | ı                             | )                                |                             | ( )                  | l            | 7             | E - NaHSO4                        | Q - Na2SO3   |
| hone:  | PO#:                  |              |               |                          |          | 1                          | 1                      |                           | 1.                  | _   _   | 1                               | l                             |                                  |                             | 1                    |              |               | F - MeOH<br>G - Amchlor           | R - Na2S2SO3<br>S - H2SO4  |
|  | Purchase Order        | r not requir |               |                          |          | 1                          | 1                      | 2                         | - 18                | 8   §   | 1 09                            | Ē                             | 8                                |                             |                      |              |               | H - Ascorbic Acid                 | T - TSP Dodecahydraf   |
| mail:  | WO#:                  |              |               |                          |          |                            |                        | €.                        |                     |   | Į                               | Ī                             | 8                                |                             |                      |              |               | I - Ice<br>J - Di Water           | U - Acetone<br>V - MCAA  |
| palmer@gesonline.com Project Name:   | Project #:            |              |               |                          |          | ا ـ ا                      |                        | 8 8                       | 1                   | 21B - (MOD) STARS Liet - VOA - 80<br>8 Pest - Priority Pollutant Pesticid | 279C - (MOD) TCL 8VOA - OLM04.2 | 210B - Blochemical Oxygen Den | DC_Calcd - Total Dissolved Solid | 0D - Total Suspended Solids |                      |              |               | K-EDTA                            | W-ph 4-5   |
| শত্যুক্তর মন্ত্রনক:<br>NYSDEC - Gastown WWTP/Gastown Event Desc: Qtrly Po:   |                       |              |               |                          |          | 200.7 - (MOD) Local Method | 1                      | 2 3                       | (MOD) TOL NAT OLIVE | ¥∣₽   | 18                              | }                             | 1                                | 2                           |                      | l            |               | L-EDA                             | Z - other (specify)  |
| Site:  | SSOW#:                |              |               |                          |          | 1 🛔                        | MA_Calc - Olf & Grease | 0.4 - Phenolics, Total Re | ¥   }               | 2 2   | \ \delta                        | 9                             | Ē                                | ě                           | 3                    |              |               | Other:                            |  |
| New York   |                       |              |               |                          |          | 힣                          | 2                      | g                         | 털   [               | <b>≨</b>   ₹  | 털                               | 불                             | 2                                | 1                           | P.                   |              |               |                                   |  |
|  |                       |              | Sample        | Matrix                   |          | 티티                         | 2                      |                           | 2                   | 8   8   | Ŕ                               | ŧ                             | ×                                | 8                           | 6.4 - Cyanide, Total | Hd - +H 0091 |               |                                   |  |
|  |                       |              | Туре          | (                        |          | 울                          | ă l                    | # 1                       |                     | ž   ;   | Į                               | 8                             | ğ                                | 18                          | 8                    | 5            |               |                                   |  |
|  |                       | Sample       | (C=Comp.      | 0=colid,<br>O=weste/ell, |          | Ĭ.,                        | [ ₹ [                  | 3 18                      | ġ   :               | ģ   š   | ģ                               | ġ                             | 8                                | ė                           | 1                    | §            |               |                                   |  |
| ample Identification   | Sample Date           | Time         |               | T-Tissue, A-Air)         |          | 8                          | \$                     | 22                        |                     | 8 8   | 82                              | 2                             | 2                                | 2                           | 38                   | 훓            |               | Special In                        | structions/Note:   |
|  |                       |              |               |                          |          |                            |                        |                           |                     |   |                                 |                               |                                  |                             |                      |              |               |                                   | 2020   |
| Post-Carbon  | 3/6/13                | 1315         | G             | Water                    | NN       |                            |                        |                           | $\Box$              |   |                                 |                               |                                  |                             |                      |              |               |                                   | ACTIVITY AND ADDRESS OF THE PARTY OF THE PAR |
|  | 310112                | 11313        | 16            | ******                   | 7        | Н                          | $\vdash$               |                           | Ŧ                   | $\mp$   | 1                               |                               |                                  |                             |                      | L            | _             | <u> </u>                          |  |
|  |                       | [            | 1             |                          | Ш        | 1 1                        |                        |                           |                     | - 1   |                                 | l                             |                                  |                             |                      |              | 1             | 8                                 |  |
|  |                       |              |               |                          | Н-       | Н                          |                        | $\vdash$                  | +                   | $\neg$  | +                               | 1                             |                                  | $\overline{}$               |                      | $\vdash$     |               |                                   |  |
|  |                       |              |               |                          | Ц.       | Ш                          |                        | Щ.                        | 4                   | _   | _                               | <b>└</b>                      | $\perp$                          | _                           | $\perp$              | L.           |               | 8 <u></u> _                       |  |
|  |                       |              | 1 1           |                          | П        | 1                          |                        |                           |                     | - 1   |                                 | l                             |                                  | ĺ                           | 1                    | l            | 150           |                                   |  |
|  |                       | <del> </del> | <del>  </del> |                          | H        | Н                          |                        | $\vdash$                  | +                   | +   | +-                              | $\vdash$                      |                                  | $\vdash$                    | _                    | ┝            |               |                                   |  |
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|  |                       | -            | <del></del>   |                          | Н-       | Н                          |                        | ₩                         | +                   | +   | ╄                               | ₩                             | -                                | _                           | -                    | ⊢            | _             | #                                 |  |
|  |                       |              |               |                          | П        | П                          |                        |                           |                     |   |                                 |                               |                                  |                             |                      |              | 904           | â                                 |  |
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| Possible Hazard Identification   |                       |              |               |                          | Se       | mple                       | Dist                   | osal (                    | A fo                | e mav   | be a                            | 585                           | sed H                            | san                         | nples                | are          | retain        | ed longer than 1 m                | onth)  |
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| Johnson Recuested: I II III IV Other (specify)   |                       |              |               |                          | ۳        | Guai                       | mout                   | Jouona                    | QU.                 | roquii  | CITICIT                         |                               |                                  |                             |                      |              |               |                                   |  |
| Peliverable Requested: I, II, III, IV, Other (specify)   |                       | Date:        |               |                          | Time:    |                            |                        |                           |                     |   |                                 |                               | Meth                             | od of                       | Shipm                | nent:        |               |                                   |  |
|  |                       |              | . (           | company                  |          | Rece                       | 31                     | by:                       |                     |   |                                 | _                             | _                                | _                           | Date                 | /Time        |               | 11.                               | Company  |
| Empty Kit Relinquished by:   | Date/Time:/           |              |               |                          |          | 1 4                        | 1                      |                           | 1                   |   |                                 |                               |                                  |                             | 1                    | 1 4          | , , LI        | 1144                              | 7-7  |
| mpty Kit Relinquished by:  | Dete/Time: 3/4        | : /3         | 40            | GES                      |          |                            | $\sim$                 | -                         | _                   | u   |                                 |                               |                                  |                             |                      | 1            | ァイ            | U UIBII                           |  |
| Empty Kit Relinquished by:   | Date/Time: 3/C        | /3           | 40            | COMPANY                  |          |                            | bevied i               |                           | 7                   | u,  | _                               | _                             |                                  | _                           | Date                 | Time         | <u>&gt;,4</u> | U gigi)                           | Company  |
| Empty Kit Relinquished by: Relinquished by:  | Date/Time:            | /3           | 90            | Company                  |          | Rece                       | elved t                | by:                       | 7                   | u,  |                                 | _                             | _                                | _                           | Date                 | Time         |               | O GINI)                           |  |
| Deliverable Requested: I, II, III, IV, Other (specify)  Empty Kit Relinquished by:  Relinquished by:  Relinquished by:  Relinquished by: | Date/Time: Date/Time: | /3           | 90            | GES                      |          | Rece                       |                        | by:                       | <del></del>         | <u>u</u> ,  |                                 | _                             | _                                | _                           | Date                 | Time         |               | O GINI)                           | Company  |







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| 0 Hazelwood Drive<br>mherst, NY 14228-2298             |                       |               | C                | hain c                           | of Cu            | ıst                            | ody                        | y R  | lec                            | ore         | Ė                                       |   |         |            |              |        | <u>TestA</u>                                |                                   |
|--|-----------------------|---------------|------------------|----------------------------------|------------------|--------------------------------|----------------------------|--|--------------------------------|-------------|---|---|---------|------------|--------------|--------|---|-----------------------------------|
| hone (716) 691-2600 Fax (716) 691-7991                 |                       |               |                  |                                  |                  |                                |                            |  |                                |             |   |   |         |            |              |        | THE LEADER IN E                             | NVIRONMENTAL TE                   |
|  | Sampler;              | /             |                  | Lab I                            |                  | _                              | _                          |  | _                              | _           |   | Carrier T                               | racking | No(s):     |              |        | COC No:                                     |                                   |
| lient Information                                      |                       | Leisuh        |                  |                                  | her, Bri         | an                             |                            |  |                                |             |   | l                                       |         |            |              |        | 480-8787-1179.1                             |                                   |
| ient Contact:<br>homas Palmer                          | Phone:                |               |                  | E-Ma                             | iil:<br>n.fische | -@1-                           | -toma                      | doolo  |                                | _           |   | ľ                                       |         |            |              |        | Page:<br>Page 1 of 1                        |                                   |
| ompany:  |                       |               |                  | Uria                             | I.IISCHE         | I WIGH                         | Starrie                    | IICain   | iC.00                          |             |   | Ь.                                      |         | _          |              |        | Job#:                                       |                                   |
| roundwater & Environmental Services Inc                |                       |               |                  |                                  |                  |                                |                            |  | An                             | alysi       | s Rec                                   | ueste                                   | d       |            |              |        |   |                                   |
| ddress:  | Due Date Reques       | sted:         |                  |                                  | 8079<br>34,8     |                                |                            | $\top$   | $\neg$                         |             | $\top$                                  |   | Т       |            |              |        | Preservation Co.                            | ies:                              |
| 95 Aero Drive Suite 3                                  | TAT Requested (       | danah         |                  |                                  |                  |                                | ll                         | - 1  |                                |             |   | 11                                      | ı       | ΙI         | - 1          |        | A-HCL                                       | M - Hexane                        |
| heektowaga   |                       |               |                  |                                  |                  |                                |                            | - 1  | - 1                            |             |   | 11                                      | 1       | 11         | - !          |        | B - NaOH<br>C - Zn Acetate                  | N - None<br>O - AsNaO2            |
| late, Zip:   | 1 <                   | TO.           |                  |                                  |                  |                                |                            | - 1  |                                |             | 1                                       |   | ı       | 1 1        | - 1          |        | D - Nitric Acid                             | P - Na2O4S                        |
| Y, 14225   |                       |               |                  |                                  | #17<br>#8        |                                | Ιİ                         | - 1  | - 1                            |             | -                                       | 11                                      | 1       | 1 1        | - !          |        | E - NaHSO4<br>F - MeOH                      | Q - Na2SO3<br>R - Na2S2SO3        |
| hone:  | PO#:<br>Purchase Orde | r not requir  |                  |                                  |                  |                                | 1 1                        |  | <u> </u>                       |             |   |   | 1       | 1          | - 1          |        | G - Amchior                                 | S - H2SO4                         |
| mail:  | WO#:                  | . not requir  |                  |                                  | Ka .             |                                |                            |  | 822                            |             |   |   | 1       | 1 1        |              |        | H - Ascorbic Acid<br>I - Ice                | T - TSP Dodecahy<br>U - Acetone   |
| palmer@gesonline.com                                   |                       |               |                  |                                  | 1                | ğ                              | 11                         | 3  | δĺ                             |             |   |   |         |            |              |        | J - Di Water                                | V - MCAA                          |
| roject Name:   | Project #:            |               |                  |                                  |                  | ž                              | 8                          | 3  | 1                              |             |   |   | 1       |            | - 1          | 23     | K - EDTA<br>L - EDA                         | W - ph 4-5<br>Z - other (specify) |
| YSDEC - Gastown WWTP/Gastown Event Desc: Qtrly Pre-Car | 48002525<br>SSOW#:    |               |                  |                                  | -                | 300.0_28D - (MOD) Local Method | 100.7 - (MOD) Local Method | 1260B - (MOD) TCL list OLMO4.2   | 9021B - (MOD) STARS List - VOA | <b>a</b>    |   |   |         | 11         |              | 57. 1  | Other:                                      |                                   |
| re:<br>ew York   | oocvw#:               |               |                  |                                  |                  | 5                              | 1                          | 3  | 2                              |             |   | 1                                       | 1       |            |              |        | ourer:                                      |                                   |
|  |                       | $\overline{}$ |                  |                                  | 611              | 욯                              | 3                          | 5  | 2                              | Alkalinity, |   |   | 1       | 1 1        | - 1          |        |   |                                   |
|  |                       |               | Sample           | Matrix                           |                  | ė                              | 8                          | ፪  | ğ                              | 1           |   |   | 1       | 1 1        | -            |        |   |                                   |
|  |                       | Sample        | Type<br>(C≃comp, | S-cold.                          |                  | 3                              | 151                        | ان   | ă l                            |             |   |   | 1       | 1 1        | - 1          |        |   |                                   |
| ample identification                                   | Sample Date           |               | G=grab)          | O=weste/ell,<br>ST=Tiesus, A=Air |                  | Š                              | 8                          | 8  | 2                              | 302         |   | <b>!</b>                                | 1       |            | - 1          |        | Special In                                  | structions/Note                   |
|  |                       |               |                  |                                  |                  | N.                             | 5                          | 1 1  |                                | NE 3        |   |   | a ax    |            |              |        |   | 200 S 2002Y 25                    |
| re-Carbon  | 3/4/13                | 1375          |                  | Water                            | NN               |                                | 100.000                    | A COLUMN TO SERVICE AND ADDRESS OF THE PARTY |                                | 7           | 000000000000000000000000000000000000000 | 100000000000000000000000000000000000000 |         |            | 2782-4 89750 |        | and the second of the Control of the Second | action of the second              |
| 10-041001  | 316113                | 1325          | G                | TYALDI                           | WW.              | _                              |                            |  | $\neg$                         | 7           | +-                                      | $\vdash$                                | ┼-      | $\vdash$   |              | - 53   |   |                                   |
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|  |                       |               |                  |                                  | Ш                |                                | Ш                          |  |                                |             |   | $\perp \perp$                           | $\perp$ | Ш          |              | W      |   |                                   |
|  |                       |               |                  |                                  |                  |                                |                            |  | T                              |             |   |   |         | $  \top  $ |              |        |   |                                   |
| ossible Hazard Identification                          |                       |               |                  |                                  | - Se             | mple                           | Disn                       | osal i   | (Af                            | ee ma       | v be a                                  | sessed                                  | if sar  | nples      | are ret      | ainer  | l longer than 1 m                           | onth)                             |
| Non-Hazard Flammable Skin Irritant Poison              | n B Jonkno            | 🖵             | diological       |                                  | Ĭ                |                                | eturn                      | ToC  | liant                          |             |   | isposal E                               |         | -          |              | rchive |   | Months                            |
| eliverable Requested: I, II, III, IV, Other (specify)  | IB / OIKIO            | WII Nat       | liulugical       |                                  | Sp               | ecial                          | Instru                     | ctions   | s/QC                           | Regu        | iremen                                  |   | y Lau   |            | ^            | CHIVE  |   | MONUS                             |
|  |                       |               |                  |                                  |                  |                                |                            |  |                                |             |   |   |         |            |              |        |   |                                   |
| mpty Kit Relinquished by:                              |                       | Date:         |                  |                                  | Time:            |                                |                            |  |                                |             |   | Me                                      | thod of | Shipme     |              |        |   |                                   |
| elinquished by:  | Date/Time:            | /5//          |                  | Company<br>GC5                   | , –              | Rece                           | ejyed b                    | y:   |                                |             |   |   |         | Date/T     | ime;         | 40     | 11.1.0                                      | Company                           |
| 100  | 3/6                   | /34           | <i>J</i>         |                                  |                  | 1.                             | بېرې                       | ~2   | _`                             | $\gamma$    | <del>'</del>                            |   |         |            |              | 70     | 7/4/13                                      |                                   |
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| elinquished by:  | Date/Time:            |               |                  | Company                          |                  | Rec                            | eived b                    | v:   |                                |             |   |   |         | Date/      | ime:         |        |   | Company                           |









# **Login Sample Receipt Checklist**

Client: New York State D.E.C. Job Number: 480-33891-1

Login Number: 33891 List Source: TestAmerica Buffalo

List Number: 1

Creator: Robitaille, Zach L

| Creator: Robitaine, Zacri L  |        |         |
|--|--------|---------|
| Question   | Answer | Comment |
| Radioactivity either was not measured or, if measured, is at or below background | True   |         |
| The cooler's custody seal, if present, is intact.                                | True   |         |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |         |
| Samples were received on ice.  | True   |         |
| Cooler Temperature is acceptable.  | True   |         |
| Cooler Temperature is recorded.  | True   |         |
| COC is present.  | True   |         |
| COC is filled out in ink and legible.  | True   |         |
| COC is filled out with all pertinent information.                                | True   |         |
| Is the Field Sampler's name present on COC?                                      | True   |         |
| There are no discrepancies between the sample IDs on the containers and the COC. | True   |         |
| Samples are received within Holding Time.  | True   |         |
| Sample containers have legible labels.   | True   |         |
| Containers are not broken or leaking.  | True   |         |
| Sample collection date/times are provided.                                       | True   |         |
| Appropriate sample containers are used.  | True   |         |
| Sample bottles are completely filled.  | True   |         |
| Sample Preservation Verified   | True   |         |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |         |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | True   |         |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True   |         |
| Multiphasic samples are not present.   | True   |         |
| Samples do not require splitting or compositing.                                 | True   |         |
| Sampling Company provided.   | True   | ges     |
| Samples received within 48 hours of sampling.                                    | True   |         |
| Samples requiring field filtration have been filtered in the field.              | N/A    |         |
| Chlorine Residual checked.   | True   |         |
|  |        |         |

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# **Login Sample Receipt Checklist**

Client: New York State D.E.C. Job Number: 480-33891-1

Login Number: 33897 List Source: TestAmerica Buffalo

List Number: 1

Creator: Robitaille, Zach L

| oreator. Robitaine, Zacii L  |        |         |
|--|--------|---------|
| Question   | Answer | Comment |
| Radioactivity either was not measured or, if measured, is at or below background | True   |         |
| The cooler's custody seal, if present, is intact.                                | True   |         |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |         |
| Samples were received on ice.  | True   |         |
| Cooler Temperature is acceptable.  | True   |         |
| Cooler Temperature is recorded.  | True   |         |
| COC is present.  | True   |         |
| COC is filled out in ink and legible.  | True   |         |
| COC is filled out with all pertinent information.                                | True   |         |
| Is the Field Sampler's name present on COC?                                      | True   |         |
| There are no discrepancies between the sample IDs on the containers and the COC. | True   |         |
| Samples are received within Holding Time.  | True   |         |
| Sample containers have legible labels.   | True   |         |
| Containers are not broken or leaking.  | True   |         |
| Sample collection date/times are provided.                                       | True   |         |
| Appropriate sample containers are used.  | True   |         |
| Sample bottles are completely filled.  | True   |         |
| Sample Preservation Verified   | True   |         |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |         |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | True   |         |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True   |         |
| Multiphasic samples are not present.   | True   |         |
| Samples do not require splitting or compositing.                                 | True   |         |
| Sampling Company provided.   | True   | GES     |
| Samples received within 48 hours of sampling.                                    | True   |         |
| Samples requiring field filtration have been filtered in the field.              | N/A    |         |
| Chlorine Residual checked.   | N/A    |         |
|  |        |         |

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THE LEADER IN ENVIRONMENTAL TESTING

# **ANALYTICAL REPORT**

TestAmerica Laboratories, Inc.

TestAmerica Buffalo 10 Hazelwood Drive Amherst, NY 14228-2298 Tel: (716)691-2600

TestAmerica Job ID: 480-35166-1

Client Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Sampling Event: Mthly Post-Carbon Mthly Pre-Carbon

#### For:

New York State D.E.C. 270 Michigan Avenue Buffalo, New York 14203

Attn: Mr. Glenn May

Authorized for release by:

Brian Fischer Project Manager II

4/8/2013 2:49:50 PM

brian.fischer@testamericainc.com

·····LINKS ······

Review your project results through
Total Access

**Have a Question?** 



Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Brian Fischer Project Manager II 4/8/2013 2:49:50 PM

TestAmerica Job ID: 480-35166-1

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

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## **Definitions/Glossary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-35166-1

## **Qualifiers**

## **GC/MS VOA**

| Qualifier ( | Qualifier | Description |
|-------------|-----------|-------------|
| Qualifier   | Qualifier | Description |

Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## **General Chemistry**

| Qualifier | Qualifier Description                             |
|-----------|---|
| HF        | Field parameter with a holding time of 15 minutes |
| В         | Compound was found in the blank and sample.       |

## Glossary

| Abbreviation   | These commonly used abbreviations may or may not be present in this report.                                 |
|----------------|---|
| <del>n</del>   | Listed under the "D" column to designate that the result is reported on a dry weight basis                  |
| %R             | Percent Recovery  |
| CNF            | Contains no Free Liquid   |
| DER            | Duplicate error ratio (normalized absolute difference)  |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC            | Decision level concentration  |
| MDA            | Minimum detectable activity   |
| EDL            | Estimated Detection Limit   |
| MDC            | Minimum detectable concentration  |

EDL Estimated Detection Limit

MDC Minimum detectable concentra

MDL Method Detection Limit

ML Minimum Level (Dioxin)

ND Not detected at the reporting limit (or MDL or EDL if shown)

PQL Practical Quantitation Limit

QC Quality Control
RER Relative error ratio

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

### **Case Narrative**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-35166-1

Job ID: 480-35166-1

**Laboratory: TestAmerica Buffalo** 

Narrative

Job Narrative 480-35166-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 3/28/2013 10:17 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.4° C and 3.4° C.

#### GC/MS VOA

No analytical or quality issues were noted.

#### Ion Chromatography

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-35167-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

#### GC VOA

No analytical or quality issues were noted.

#### Metals

No analytical or quality issues were noted.

#### **General Chemistry**

Method(s) 310.2: The method blank for batch 110046 contained alkalinity above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample(s) has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Post-Carbon (480-35166-1)

No other analytical or quality issues were noted.

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Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Client Sample ID: Post-Carbon

Date Collected: 03/28/13 09:30 Date Received: 03/28/13 10:17 Lab Sample ID: 480-35166-1

Matrix: Wastewater

| Analyte                     | Result C | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|----------|-----------|-----|------|------|---|----------|----------------|---------|
| 1,1,1-Trichloroethane       | ND       |           | 1.0 | 0.82 | ug/L |   |          | 03/29/13 13:03 | 1       |
| 1,1,2,2-Tetrachloroethane   | ND       |           | 1.0 | 0.21 | ug/L |   |          | 03/29/13 13:03 | 1       |
| 1,1,2-Trichloroethane       | ND       |           | 1.0 | 0.23 | ug/L |   |          | 03/29/13 13:03 | 1       |
| 1,1-Dichloroethane          | ND       |           | 1.0 | 0.38 | ug/L |   |          | 03/29/13 13:03 | 1       |
| 1,1-Dichloroethene          | ND       |           | 1.0 | 0.29 | ug/L |   |          | 03/29/13 13:03 | 1       |
| 1,2-Dichloroethane          | ND       |           | 1.0 | 0.21 | ug/L |   |          | 03/29/13 13:03 | 1       |
| 1,2-Dichloroethene, Total   | ND       |           | 2.0 | 0.70 | ug/L |   |          | 03/29/13 13:03 | 1       |
| 1,2-Dichloropropane         | ND       |           | 1.0 | 0.72 | ug/L |   |          | 03/29/13 13:03 | 1       |
| 2-Hexanone                  | ND       |           | 5.0 | 1.2  | ug/L |   |          | 03/29/13 13:03 | 1       |
| 2-Butanone (MEK)            | ND       |           | 10  | 1.3  | ug/L |   |          | 03/29/13 13:03 | 1       |
| 4-Methyl-2-pentanone (MIBK) | ND       |           | 5.0 | 2.1  | ug/L |   |          | 03/29/13 13:03 | 1       |
| Acetone                     | ND       |           | 10  | 3.0  | ug/L |   |          | 03/29/13 13:03 | 1       |
| Benzene                     | 33       |           | 1.0 | 0.41 | ug/L |   |          | 03/29/13 13:03 | 1       |
| Bromodichloromethane        | 0.72 J   | I         | 1.0 | 0.39 | ug/L |   |          | 03/29/13 13:03 | 1       |
| Bromoform                   | ND       |           | 1.0 | 0.26 | ug/L |   |          | 03/29/13 13:03 | 1       |
| Bromomethane                | ND       |           | 1.0 | 0.69 | ug/L |   |          | 03/29/13 13:03 | 1       |
| Carbon disulfide            | ND       |           | 1.0 | 0.19 | ug/L |   |          | 03/29/13 13:03 | 1       |
| Carbon tetrachloride        | ND       |           | 1.0 | 0.27 | ug/L |   |          | 03/29/13 13:03 | 1       |
| Chlorobenzene               | ND       |           | 1.0 | 0.75 | ug/L |   |          | 03/29/13 13:03 | 1       |
| Dibromochloromethane        | ND       |           | 1.0 | 0.32 | ug/L |   |          | 03/29/13 13:03 | 1       |
| Chloroethane                | ND       |           | 1.0 | 0.32 | ug/L |   |          | 03/29/13 13:03 | 1       |
| Chloroform                  | 18       |           | 1.0 | 0.34 | ug/L |   |          | 03/29/13 13:03 | 1       |
| Chloromethane               | ND       |           | 1.0 | 0.35 | ug/L |   |          | 03/29/13 13:03 | 1       |
| cis-1,3-Dichloropropene     | ND       |           | 1.0 | 0.36 | ug/L |   |          | 03/29/13 13:03 | 1       |
| Ethylbenzene                | 3.1      |           | 1.0 | 0.74 | ug/L |   |          | 03/29/13 13:03 | 1       |
| Methylene Chloride          | ND       |           | 1.0 | 0.44 | ug/L |   |          | 03/29/13 13:03 | 1       |
| Styrene                     | ND       |           | 1.0 | 0.73 | ug/L |   |          | 03/29/13 13:03 | 1       |
| Tetrachloroethene           | ND       |           | 1.0 | 0.36 | ug/L |   |          | 03/29/13 13:03 | 1       |
| Toluene                     | 5.1      |           | 1.0 | 0.51 | ug/L |   |          | 03/29/13 13:03 | 1       |
| trans-1,3-Dichloropropene   | ND       |           | 1.0 | 0.37 | ug/L |   |          | 03/29/13 13:03 | 1       |
| Trichloroethene             | ND       |           | 1.0 | 0.46 | ug/L |   |          | 03/29/13 13:03 | 1       |
| Vinyl chloride              | ND       |           | 1.0 | 0.90 | ug/L |   |          | 03/29/13 13:03 | 1       |
| Vinyl acetate               | ND       |           | 5.0 | 0.85 | ug/L |   |          | 03/29/13 13:03 | 1       |
| Xylenes, Total              | 1.1 J    |           | 2.0 | 0.66 | ug/L |   |          | 03/29/13 13:03 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 110       |           | 66 - 137 |          | 03/29/13 13:03 | 1       |
| Toluene-d8 (Surr)            | 98        |           | 71 - 126 |          | 03/29/13 13:03 | 1       |
| 4-Bromofluorobenzene (Surr)  | 98        |           | 73 - 120 |          | 03/29/13 13:03 | 1       |

| Method: 8021B - | · Volatile Organic | Compounds (GC) |
|-----------------|--------------------|----------------|

| wethod: 8021B - Volatile Organic Co | mpounas | (GC)      |      |       |      |   |          |                |         |
|-------------------------------------|---------|-----------|------|-------|------|---|----------|----------------|---------|
| Analyte                             | Result  | Qualifier | RL   | MDL   | Unit | D | Prepared | Analyzed       | Dil Fac |
| 1,2,4-Trimethylbenzene              | ND      |           | 0.20 | 0.035 | ug/L |   |          | 04/05/13 10:54 | 1       |
| 1,3,5-Trimethylbenzene              | ND      |           | 0.20 | 0.15  | ug/L |   |          | 04/05/13 10:54 | 1       |
| Benzene                             | 35      |           | 0.20 | 0.023 | ug/L |   |          | 04/05/13 10:54 | 1       |
| Ethylbenzene                        | 2.8     |           | 0.20 | 0.029 | ug/L |   |          | 04/05/13 10:54 | 1       |
| Isopropylbenzene                    | ND      |           | 0.20 | 0.027 | ug/L |   |          | 04/05/13 10:54 | 1       |
| Methyl tert-butyl ether             | ND      |           | 0.40 | 0.044 | ug/L |   |          | 04/05/13 10:54 | 1       |
| m,p-Xylene                          | 0.77    |           | 0.40 | 0.054 | ug/L |   |          | 04/05/13 10:54 | 1       |
| n-Butylbenzene                      | ND      |           | 0.20 | 0.031 | ug/L |   |          | 04/05/13 10:54 | 1       |

TestAmerica Buffalo

# **Client Sample Results**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Lab Sample ID: 480-35166-1

TestAmerica Job ID: 480-35166-1

**Matrix: Wastewater** 

## **Client Sample ID: Post-Carbon**

Date Collected: 03/28/13 09:30 Date Received: 03/28/13 10:17

| Analyte  | Result                         | Qualifier | RL         | MDL                   | Unit         | D        | Prepared                 | Analyzed                 | Dil Fac                                  |
|--|--------------------------------|-----------|------------|-----------------------|--------------|----------|--------------------------|--------------------------|--|
| n-Propylbenzene  | ND                             |           | 0.20       | 0.13                  | ug/L         |          |                          | 04/05/13 10:54           | 1  |
| o-Xylene   | ND                             |           | 0.20       | 0.027                 | ug/L         |          |                          | 04/05/13 10:54           | 1  |
| p-Cymene   | ND                             |           | 0.20       | 0.030                 | ug/L         |          |                          | 04/05/13 10:54           | 1  |
| sec-Butylbenzene   | ND                             |           | 0.20       | 0.020                 | ug/L         |          |                          | 04/05/13 10:54           | 1  |
| Toluene  | 4.8                            |           | 0.20       | 0.036                 | ug/L         |          |                          | 04/05/13 10:54           | 1  |
| Xylenes, Total   | 0.86                           |           | 0.60       | 0.054                 | ug/L         |          |                          | 04/05/13 10:54           | 1  |
|  | • •                            |           |            |                       |              | _        |                          |                          |  |
|  | • •                            |           |            |                       |              |          |                          |                          |  |
| Analyte  | Result                         | Qualifier | RL         |                       | Unit         | <u>D</u> | Prepared                 | Analyzed                 | Dil Fac                                  |
| Analyte  | • •                            | Qualifier | RL<br>50.0 |                       | Unit<br>ug/L | <u>D</u> | Prepared 03/29/13 07:00  | Analyzed 03/29/13 13:20  | Dil Fac                                  |
| Analyte Iron   | Result                         | Qualifier |            |                       |              | <u>D</u> |                          |                          | Dil Fac                                  |
| Analyte Iron General Chemistry   | Result 170                     | Qualifier |            | 19.3                  |              | <u>D</u> |                          |                          | 1  |
| Analyte Iron General Chemistry Analyte   | Result 170                     |           | 50.0       | 19.3                  | ug/L<br>Unit |          | 03/29/13 07:00           | 03/29/13 13:20           | 1  |
| Method: 200.7 Rev 4.4 - Metal: Analyte Iron General Chemistry Analyte Cyanide, Total Analyte | Result   170     Result   0.31 |           | 50.0       | 19.3<br>MDL<br>0.0050 | ug/L<br>Unit |          | 03/29/13 07:00  Prepared | 03/29/13 13:20  Analyzed | Dil Fac  Dil Fac  1  Dil Fac  1  Dil Fac |

# **Client Sample Results**

Client: New York State D.E.C.

**Client Sample ID: Pre-Carbon** 

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-35166-1

Lab Sample ID: 480-35167-1

**Matrix: Wastewater** 

Date Collected: 03/28/13 09:45 Date Received: 03/28/13 10:17

| Method: 200.7 Rev 4.4 - Metals | (ICP)  |           |      |      |      |   |                |                |         |
|--------------------------------|--------|-----------|------|------|------|---|----------------|----------------|---------|
| Analyte                        | Result | Qualifier | RL   | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Calcium                        | 133000 |           | 500  | 100  | ug/L |   | 03/29/13 07:00 | 03/29/13 13:13 | 1       |
| Iron                           | 498    |           | 50.0 | 19.3 | ug/L |   | 03/29/13 07:00 | 03/29/13 13:13 | 1       |
| Magnesium                      | 69100  |           | 200  | 43.4 | ug/L |   | 03/29/13 07:00 | 04/02/13 18:06 | 1       |
| Potassium                      | 3650   |           | 500  | 100  | ug/L |   | 03/29/13 07:00 | 03/29/13 13:13 | 1       |
| Sodium                         | 61700  |           | 1000 | 324  | ug/L |   | 03/29/13 07:00 | 03/29/13 13:13 | 1       |
| General Chemistry              |        |           |      |      |      |   |                |                |         |
| Analyte                        | Result | Qualifier | RL   | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Chloride                       | 142    |           | 2.5  | 1.4  | mg/L |   |                | 04/03/13 17:14 | 5       |
| Sulfate                        | 174    |           | 10.0 | 1.7  | mg/L |   |                | 04/03/13 17:14 | 5       |
| Alkalinity, Total              | 448    | В         | 100  | 40.0 | mg/L |   |                | 03/29/13 21:02 | 10      |

## **Lab Chronicle**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-35166-1

Lab Sample ID: 480-35166-1

Lab Sample ID: 480-35167-1

**Matrix: Wastewater** 

Matrix: Wastewater

Client Sample ID: Post-Carbon

Date Collected: 03/28/13 09:30 Date Received: 03/28/13 10:17

|           | Batch    | Batch         |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|---------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method        | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8260B         |     | 1        | 109925 | 03/29/13 13:03 | TRB     | TAL BUF |
| Total/NA  | Analysis | 8021B         |     | 1        | 111055 | 04/05/13 10:54 | DB      | TAL BUF |
| Total/NA  | Prep     | 200.7         |     |          | 109782 | 03/29/13 07:00 | SS      | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |     | 1        | 110063 | 03/29/13 13:20 | LH      | TAL BUF |
| Total/NA  | Analysis | SM 4500 H+ B  |     | 1        | 109791 | 03/28/13 17:10 | KS      | TAL BUF |
| Total/NA  | Prep     | Distill/CN    |     |          | 110307 | 04/01/13 18:24 | NH      | TAL BUF |
| Total/NA  | Analysis | 335.4         |     | 1        | 110328 | 04/01/13 21:33 | NH      | TAL BUF |

Client Sample ID: Pre-Carbon

Date Collected: 03/28/13 09:45

Date Received: 03/28/13 10:17

|           | Batch    | Batch         |             | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|---------------|-------------|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method        | Run         | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Prep     | 200.7         | <del></del> |          | 109782 | 03/29/13 07:00 | SS      | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |             | 1        | 110063 | 03/29/13 13:13 | LH      | TAL BUF |
| Total/NA  | Prep     | 200.7         |             |          | 109782 | 03/29/13 07:00 | SS      | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |             | 1        | 110621 | 04/02/13 18:06 | LH      | TAL BUF |
| Total/NA  | Analysis | 310.2         |             | 10       | 110046 | 03/29/13 21:02 | NH      | TAL BUF |
| Total/NA  | Analysis | 300.0         |             | 5        | 110668 | 04/03/13 17:14 | KC      | TAL BUF |

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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TestAmerica Buffalo

# **Certification Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-35166-1

## **Laboratory: TestAmerica Buffalo**

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

| uthority               | Program                         |                               | EPA Region            | Certification ID   | Expiration Date |  |
|------------------------|---------------------------------|-------------------------------|-----------------------|--------------------|-----------------|--|
| ew York                | NELAP                           |                               | 2                     | 10026              | 04-01-14        |  |
| The following analytes | are included in this report, bu | t are not certified under t   | his certification:    |                    |                 |  |
| Analysis Method        | Prep Method                     | Matrix                        | Analyt                | e                  |                 |  |
| 200.7 Rev 4.4          | 200.7                           | Wastewater                    | Magne                 | esium              |                 |  |
| 200.7 Rev 4.4          | 200.7                           | Water                         | Magne                 | esium              |                 |  |
| 300.0                  |                                 | Wastewater                    | Chloric               | de                 |                 |  |
| 300.0                  |                                 | Wastewater                    | Sulfate               | Э                  |                 |  |
| 300.0                  |                                 | Water                         | Chloric               | de                 |                 |  |
| 300.0                  |                                 | Water                         | Sulfate               | e                  |                 |  |
| 335.4                  | Distill/CN                      | Wastewater                    | Cyanio                | de, Total          |                 |  |
| 335.4                  | Distill/CN                      | Water                         | Cyanio                | de, Total          |                 |  |
| 8021B                  |                                 | Wastewater                    | 1,2,4-                | Trimethylbenzene   |                 |  |
| 8021B                  |                                 | Wastewater                    | 1,3,5-                | Trimethylbenzene   |                 |  |
| 8021B                  |                                 | Wastewater                    | Benze                 | ne                 |                 |  |
| 8021B                  |                                 | Wastewater                    | Ethylb                | enzene             |                 |  |
| 8021B                  |                                 | Wastewater                    | Isopro                | pylbenzene         |                 |  |
| 8021B                  |                                 | Wastewater                    | Methy                 | I tert-butyl ether |                 |  |
| 8021B                  |                                 | Wastewater                    | n-Buty                | lbenzene           |                 |  |
| 8021B                  |                                 | Wastewater                    | n-Prop                | ylbenzene          |                 |  |
| 8021B                  |                                 | Wastewater                    | p-Cym                 | nene               |                 |  |
| 8021B                  |                                 | Wastewater                    | sec-Bu                | utylbenzene        |                 |  |
| 8021B                  |                                 | Wastewater                    | Toluer                | ne                 |                 |  |
| 8021B                  |                                 | Wastewater                    | Xylene                | es, Total          |                 |  |
| 8021B                  |                                 | Water                         | 1,2,4-                | Trimethylbenzene   |                 |  |
| 8021B                  |                                 | Water                         | 1,3,5-                | Trimethylbenzene   |                 |  |
| 8021B                  |                                 | Water                         | Benze                 | ne                 |                 |  |
| 8021B                  |                                 | Water                         | Ethylb                | enzene             |                 |  |
| 8021B                  |                                 | Water                         | Isopro                | pylbenzene         |                 |  |
| 8021B                  |                                 | Water                         | Methy                 | I tert-butyl ether |                 |  |
| 8021B                  |                                 | Water                         | -                     | lbenzene           |                 |  |
| 8021B                  |                                 | Water                         | n-Prop                | ylbenzene          |                 |  |
| 8021B                  |                                 | Water                         | p-Cym                 | nene               |                 |  |
| 8021B                  |                                 | Water                         | • •                   | utylbenzene        |                 |  |
| 8021B                  |                                 | Water                         | Toluer                | -                  |                 |  |
| 8021B                  |                                 | Water                         | Xylene                | es, Total          |                 |  |
| The following analytes | are included in this report, bu | t certification is not offere | ed by the governing a | authority:         |                 |  |
| Analysis Method        | Prep Method                     | Matrix                        | Analyt                | -                  |                 |  |
| SM 4500 H+ B           |                                 | Wastewater                    | pH                    |                    |                 |  |
| SM 4500 H+ B           |                                 | Water                         | pН                    |                    |                 |  |

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# **Method Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-35166-1

| Method        | Method Description                 | Protocol | Laboratory |
|---------------|------------------------------------|----------|------------|
| 8260B         | Volatile Organic Compounds (GC/MS) | SW846    | TAL BUF    |
| 8021B         | Volatile Organic Compounds (GC)    | SW846    | TAL BUF    |
| 200.7 Rev 4.4 | Metals (ICP)                       | EPA      | TAL BUF    |
| 300.0         | Anions, Ion Chromatography         | MCAWW    | TAL BUF    |
| 310.2         | Alkalinity                         | MCAWW    | TAL BUF    |
| 335.4         | Cyanide, Total                     | MCAWW    | TAL BUF    |
| SM 4500 H+ B  | pH                                 | SM       | TAL BUF    |

#### **Protocol References:**

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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# **Sample Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-35166-1

| Lab Sample ID | Client Sample ID | Matrix     | Collected      | Received       |
|---------------|------------------|------------|----------------|----------------|
| 480-35166-1   | Post-Carbon      | Wastewater | 03/28/13 09:30 | 03/28/13 10:17 |
| 480-35167-1   | Pre-Carbon       | Wastewater | 03/28/13 09:45 | 03/28/13 10:17 |

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## TestAmerica Buffalo

10 Plazelwc\_d Drive

Amherst, NY 14228-2298

Phone (716) 691-2600 Fax (716) 691-7991

# **Chain of Custody Record**

<u>TestAmerica</u>

THE LEADER IN ENVIRONMENTAL TERRITORS

| Client Information   | Sampler:               | 2          |                  | Lab F                            |                |                     |                   |                                |                        | _          | C                 | arrier Tr | acking   | No(s):   |         |              | COC No:                       |                                   |
|--|------------------------|------------|------------------|----------------------------------|----------------|---------------------|-------------------|--------------------------------|------------------------|------------|-------------------|-----------|----------|----------|---------|--------------|-------------------------------|-----------------------------------|
| Client Information Client Contact:                                       | Phone:                 | 61862      |                  | FISCI<br>E-Ma                    | her, B         | rian                |                   |                                |                        |            | $\dashv$          | $\dashv$  |          |          |         |              | 480-30383-1177.1<br>Page:     |                                   |
| Thomas Palmer  |                        |            |                  |                                  |                | er@te               | stame             | ericain                        | c.com                  | 1          |                   |           |          |          |         |              | Page 1 of 1                   |                                   |
| Company: Groundwater & Environmental Services Inc                        |                        |            |                  |                                  |                |                     |                   |                                | Ana                    | lvsis      | Requ              | estec     |          |          |         | _            | Job #:                        |                                   |
| Address  | Due Date Request       | ed:        |                  |                                  | Ī              |                     |                   |                                |                        | 7          | 1                 |           |          |          |         |              | Preservation Cod              | es:                               |
| 495 Aero Drive Suite 3<br>City:  | TAT Requested (d       | avs).      |                  |                                  |                |                     |                   |                                |                        |            |                   |           |          | $\perp$  | $\perp$ |              | A - HCL                       | M - Hexane                        |
| Cheektowaga  | TAT Requested (u       | aysj.      |                  |                                  |                |                     |                   |                                |                        |            |                   |           |          |          |         |              | B - NaOH<br>C - Zn Acetate    | N - None<br>O - AsNaO2            |
| State, Zip:<br>NY, 14225   | くな                     |            |                  |                                  |                |                     |                   | _                              | +                      | ╪          | +                 | -         | $\vdash$ | $\dashv$ | +-      |              | D - Nitric Acid<br>E - NaHSO4 | Q - Na2SO3                        |
| Phone:   | PO #:                  |            |                  |                                  |                |                     | ΙI                |                                |                        |            |                   |           |          |          |         |              | F - MeOH<br>G - Amchlor       | R - Na2S2SO3<br>S - H2SO4         |
| Email:   | Purchase Order<br>WO#: | not requir |                  |                                  | õ              |                     | 1 1               | - 8021                         |                        |            | 11                | 1         |          |          |         |              | H - Ascorbic Acid             | T - TSP Dodecahydrate             |
| tpalmer@gesonline.com  | VVO #:                 |            |                  |                                  | 0 3            | 2                   | 2                 | ě                              |                        |            |                   |           |          |          |         | <u>بو</u>    | I - Ice<br>J - DI Water       | U - Acetone<br>V - MCAA           |
| Project Name:<br>NYSDEC - Gastown WWTP/Gastown Event Desc: Mthly Post-Ca | Project #:             |            |                  |                                  | ٤              | 5                   | list OLM04.2      | ž                              |                        |            | 1                 | -         |          |          |         | containers   | K - EDTA<br>L - EDA           | W - ph 4-5<br>Z - other (specify) |
| Site:  | SSOW#:                 |            |                  |                                  | ם              |                     | list              | S.                             | <u>.</u>               |            |                   |           |          |          | -       | Son          | Other:                        |                                   |
| New York   |                        |            |                  |                                  | Sam            | 2                   | 뒫                 | STA                            | ٥, ا                   | <u> </u>   | 1 1               |           |          |          |         | 6            |                               |                                   |
|  |                        |            | Sample           | Matrix                           | terec          | 2                   | 8260B - (MOD) TCL | 8021B - (MOD) STARS List - VOA | 335.4 - Cyanide, Total | -          | 11                |           |          |          |         | Total Number |                               |                                   |
|  |                        | Sample     | Type<br>(C=comp, | (W=water,<br>S=solid,            | Field Filt     | 200.7 - Iron        | B-(s              | 8                              | <u>ن</u> ا             | 9          |                   |           |          |          |         | 2            |                               |                                   |
| Sample Identification  | Sample Date            | Time       | G=grab)          | O=waste/oil,<br>T=Tissue, A=Air) | Field          | 200.                | 8260              | 8021                           | 335.                   | ž k        |                   |           |          |          |         | 10tz         | Specia! Ins                   | structions/Note:                  |
|  | > < <                  | ><         | Preservation     | on Code:                         | $\boxtimes$    | $\langle r \rangle$ | Α                 | А В                            | N                      |            |                   |           |          |          |         | $\boxtimes$  |                               |                                   |
| Post-Carbon  | 3/25/13                | 0730       | 6                | Water                            | NN             | 1                   | /                 | / .                            | /  /                   | ,          | 1 1               |           |          |          |         |              |                               |                                   |
|  |                        |            |                  |                                  | П              |                     |                   |                                |                        |            |                   |           |          |          |         |              |                               |                                   |
|  |                        |            |                  |                                  | H              | +                   | $\Box$            |                                | +                      |            | ++                | _         |          | $\vdash$ |         | $\vdash$     |                               |                                   |
|  |                        |            | $\vdash$         |                                  | ₩              | +                   | +                 | $\vdash$                       | +                      | +          | ++                | _         |          | -        | +       | -            |                               |                                   |
|  |                        | _          | -                |                                  | Щ              | 4                   | $\perp$           |                                | $\perp$                |            | ++                |           |          | $\perp$  |         | _            |                               |                                   |
|  |                        |            |                  |                                  | Ш              |                     |                   |                                |                        |            |                   |           |          |          |         |              |                               |                                   |
|  |                        |            |                  |                                  | Ш              |                     |                   |                                |                        |            |                   |           |          |          |         |              |                               |                                   |
|  |                        | _          |                  | _                                | П              |                     | $\Box$            |                                |                        |            | 1 1               |           |          |          |         |              |                               |                                   |
|  | <del> </del>           |            | +                |                                  | H              | +                   | $\vdash$          | $\vdash$                       | +                      | +          | +                 | +         |          | +        | +       | -            |                               |                                   |
| <u> </u>   |                        |            |                  |                                  | Н              |                     | $\vdash$          |                                | +                      |            | 1 1               | _         |          | $\vdash$ | _       | _            |                               |                                   |
|  |                        |            |                  |                                  | Ц              | $\perp$             | $\sqcup$          |                                |                        |            | $\perp \perp$     | $\perp$   |          |          |         |              |                               |                                   |
|  |                        |            |                  |                                  | П              |                     |                   |                                |                        |            | 1                 |           |          |          |         |              |                               |                                   |
|  |                        |            |                  |                                  | П              |                     |                   |                                | T                      |            |                   |           |          |          |         |              |                               |                                   |
| Possible Hazard Identification   |                        | <u> </u>   |                  |                                  | <del>ا</del> ا | ample               | e Disp            | osal (                         | A fee                  | e may      | be ass            | essed     | if sam   | ples a   | re reta | ined         | l longer than 1 mg            | onth)                             |
| Non-Hazard Flammable Skin Imitant Poison                                 | B Onknow               | n Rac      | fiological       |                                  |                | $\Box_{\mu}$        | Return            | To Cli                         | ent                    |            | Z <sub>bist</sub> | osal B    | y Lab    |          | An      | chive        | l longer than 1 me<br>e For   | Months                            |
| Deliverable Requested: I, II, III, IV, Other (specify)                   |                        |            |                  |                                  | s              | pecial              | Instru            | ections                        | /QC F                  | Requir     | ements            |           |          |          |         |              |                               |                                   |
| Empty Kit Relinquished by:   |                        | Date:      |                  |                                  | Time           | e:                  | _                 |                                | _                      |            |                   | Met       | hod of   | Shipmen  | ıt:     |              |                               |                                   |
| Relinquished by: 11/2 G65  | Date/Time              | 13 1.      | D15" C           | ompany                           |                | Rec                 | ewed b            | lur                            | ~                      | 1/1        | Wir               |           |          | Date/Ti  | ne: 7.7 | 1            | 2 10:17                       | Company BUHOU                     |
| Relinquished by:   | Date/Time:             |            | _                | ompany                           |                | Reg                 | eved b            | y: /                           | 1/                     | y U        | VUVI              |           |          | Date/Tir | - 0     | ( '          | 7 10:11                       | Company                           |
| Relinquished by:   | Date/Time:             |            | c                | ompany                           |                | Received by:        |                   |                                |                        | Date/Time: |                   |           |          |          | Company |              |                               |                                   |
| Custody Seals Intact: Custody Seal No.: Δ Yes Δ No                       |                        |            |                  |                                  | _              | Coo                 | ler Tem           | peratur                        | e(s) °C                | and C      | ther Rem          | arks:     |          |          |         | _            | 3.4#2                         |                                   |









(J)

### TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

# **Chain of Custody Record**



Phone (716) 691-2600 Fax (716) 691-7991 Carrier Tracking No(s): COC No: Fischer, Brian 480-30374-1176.1 Client Information Client Contact: E-Mail Page: Thomas Palmer brian.fischer@testamericainc.com Page 1 of 1 Company Job #: **Analysis Requested** Groundwater & Environmental Services Inc Due Date Requested: Preservation Codes: 495 Aero Drive Suite 3 TAT Requested (days) B - NaOH N - None Cheektowaga C - Zn Acetate O - AsNaO2 State, Zip: E - NaHSQ4 Q - Na2SO3 NY, 14225 F - MeOH R - Na2S2SO3 Phone: G - Amchior S - H2SO4 Purchase Order not requir H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water K - EDTA L - EDA Other: V - MCAA 300.0\_28D - (MOD) Local Method tpalmer@gesonline.com W - ph 4-5 Project Name: Project #: 200.7 - (MOD) Local Method Z - other (specify) NYSDEC - Gastown WWTP/Gastown Event Desc: Mthly Pre-Car 48002525 SSOW#: 6 New York Total Number Matrix Sample Type S=solid, Sample (C=comp, O=waste/oil. Special Instructions/Note: Sample Identification Sample Date Time G=grab) BT=Tissue, A=Air Preservation Code: D 3/25/13 Pre-Carbon Water 0145  $\odot$ Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Disposal By Lab Skin Irritant Radiological Return To Client Non-Hazard Flammable Months Special Instructions/QC Requirements: Deliverable Requested: I, II, III, IV, Other (specify) Method of Shipment: Empty Kit Relinquished by: Date: Time: Company Relinquished by 1015 Date/Time Relinquished by: Company Date/Time Company Relinquished by Date/Time: Company Custody Seal No. Cooler Temperature(s) °C and Other Remarks. Custody Seals Intact:

Δ Yes Δ No

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# **Login Sample Receipt Checklist**

Client: New York State D.E.C. Job Number: 480-35166-1

Login Number: 35166 List Source: TestAmerica Buffalo

List Number: 1

Creator: Robitaille, Zach L

| Question   | Answer | Comment |
|--|--------|---------|
| Radioactivity either was not measured or, if measured, is at or below background | True   |         |
| The cooler's custody seal, if present, is intact.                                | True   |         |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |         |
| Samples were received on ice.  | True   |         |
| Cooler Temperature is acceptable.  | True   |         |
| Cooler Temperature is recorded.  | True   |         |
| COC is present.  | True   |         |
| COC is filled out in ink and legible.  | True   |         |
| COC is filled out with all pertinent information.                                | True   |         |
| Is the Field Sampler's name present on COC?                                      | True   |         |
| There are no discrepancies between the sample IDs on the containers and the COC. | True   |         |
| Samples are received within Holding Time.  | True   |         |
| Sample containers have legible labels.   | True   |         |
| Containers are not broken or leaking.  | True   |         |
| Sample collection date/times are provided.                                       | True   |         |
| Appropriate sample containers are used.  | True   |         |
| Sample bottles are completely filled.  | True   |         |
| Sample Preservation Verified   | True   |         |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |         |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | True   |         |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True   |         |
| Multiphasic samples are not present.   | True   |         |
| Samples do not require splitting or compositing.                                 | True   |         |
| Sampling Company provided.   | True   | GES     |
| Samples received within 48 hours of sampling.                                    | True   |         |
| Samples requiring field filtration have been filtered in the field.              | N/A    |         |
| Chlorine Residual checked.   | N/A    |         |
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# **Login Sample Receipt Checklist**

Client: New York State D.E.C. Job Number: 480-35166-1

Login Number: 35167 List Source: TestAmerica Buffalo

List Number: 1

Creator: Robitaille, Zach L

| orontor. Robitaino, Laon L   |        |         |
|--|--------|---------|
| Question   | Answer | Comment |
| Radioactivity either was not measured or, if measured, is at or below background | True   |         |
| The cooler's custody seal, if present, is intact.                                | True   |         |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |         |
| Samples were received on ice.  | True   |         |
| Cooler Temperature is acceptable.  | True   |         |
| Cooler Temperature is recorded.  | True   |         |
| COC is present.  | True   |         |
| COC is filled out in ink and legible.  | True   |         |
| COC is filled out with all pertinent information.                                | True   |         |
| Is the Field Sampler's name present on COC?                                      | True   |         |
| There are no discrepancies between the sample IDs on the containers and the COC. | True   |         |
| Samples are received within Holding Time.  | True   |         |
| Sample containers have legible labels.   | True   |         |
| Containers are not broken or leaking.  | True   |         |
| Sample collection date/times are provided.                                       | True   |         |
| Appropriate sample containers are used.  | True   |         |
| Sample bottles are completely filled.  | True   |         |
| Sample Preservation Verified   | True   |         |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |         |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | N/A    |         |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True   |         |
| Multiphasic samples are not present.   | True   |         |
| Samples do not require splitting or compositing.                                 | True   |         |
| Sampling Company provided.   | True   | GES     |
| Samples received within 48 hours of sampling.                                    | True   |         |
| Samples requiring field filtration have been filtered in the field.              | N/A    |         |
| Chlorine Residual checked.   | N/A    |         |
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THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo 10 Hazelwood Drive Amherst, NY 14228-2298 Tel: (716)691-2600

TestAmerica Job ID: 480-37392-1

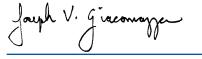
Client Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Sampling Event: Mthly Post-Carbon Mthly Pre-Carbon

#### For:

New York State D.E.C. 270 Michigan Avenue Buffalo, New York 14203

Attn: Mr. Glenn May



Authorized for release by: 5/13/2013 10:26:24 AM

Joe Giacomazza, Project Administrator joe.giacomazza@testamericainc.com

Designee for

Brian Fischer, Project Manager II brian.fischer@testamericainc.com

.....LINKS .....

Review your project results through

Total Access

**Have a Question?** 



**Visit us at:** www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Joe Giacomazza **Project Administrator** 5/13/2013 10:26:24 AM

Page 2 of 16

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

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## **Definitions/Glossary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-37392-1

## **Qualifiers**

## **GC/MS VOA**

Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## **General Chemistry**

| Qualifier | Qualifier | Description |
|-----------|-----------|-------------|
| Qualifiei | Qualifier | Description |

HF Field parameter with a holding time of 15 minutes

## **Glossary**

ML

| Abbreviation   | These commonly used abbreviations may or may not be present in this report.                                 |  |  |  |  |  |  |
|----------------|---|--|--|--|--|--|--|
| ¤              | isted under the "D" column to designate that the result is reported on a dry weight basis                   |  |  |  |  |  |  |
| %R             | Percent Recovery  |  |  |  |  |  |  |
| CNF            | Contains no Free Liquid   |  |  |  |  |  |  |
| DER            | Duplicate error ratio (normalized absolute difference)  |  |  |  |  |  |  |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |  |  |  |  |  |  |
| DLC            | Decision level concentration  |  |  |  |  |  |  |
| MDA            | Minimum detectable activity   |  |  |  |  |  |  |

EDL Estimated Detection Limit

MDC Minimum detectable concentration

MDL Method Detection Limit

ND Not detected at the reporting limit (or MDL or EDL if shown)

Minimum Level (Dioxin)

PQL Practical Quantitation Limit

QC Quality Control
RER Relative error ratio

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

### **Case Narrative**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-37392-1

Job ID: 480-37392-1

**Laboratory: TestAmerica Buffalo** 

Narrative

Job Narrative 480-37392-1

#### Receipt

The samples were received on 5/1/2013 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 17.6° C and 17.8° C.

#### GC/MS VOA

No analytical or quality issues were noted.

#### Ion Chromatography

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-37392-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

#### GC VOA

Method(s) 8021B: The following sample was diluted to bring the concentration of target analytes within the calibration range: Post-Carbon (480-37393-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

#### Metals

No analytical or quality issues were noted.

#### **General Chemistry**

Method(s) SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample(s) has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Post-Carbon (480-37393-1)

No other analytical or quality issues were noted.

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# **Client Sample Results**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-37392-1

Lab Sample ID: 480-37392-1

**Matrix: Wastewater** 

**Client Sample ID: Pre-Carbon** Date Collected: 05/01/13 10:10

Date Received: 05/01/13 10:30

| Method: 200.7 Rev 4.4 - Metals | • •              |      |      |      | _ |                |                |         |
|--------------------------------|------------------|------|------|------|---|----------------|----------------|---------|
| Analyte                        | Result Qualifier | RL   | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Calcium                        | 97400            | 500  | 100  | ug/L |   | 05/02/13 10:50 | 05/02/13 22:47 | 1       |
| Iron                           | 616              | 50.0 | 19.3 | ug/L |   | 05/02/13 10:50 | 05/02/13 22:47 | 1       |
| Magnesium                      | 50700            | 200  | 43.4 | ug/L |   | 05/02/13 10:50 | 05/02/13 22:47 | 1       |
| Potassium                      | 3450             | 500  | 100  | ug/L |   | 05/02/13 10:50 | 05/02/13 22:47 | 1       |
| Sodium                         | 44200            | 1000 | 324  | ug/L |   | 05/02/13 10:50 | 05/02/13 22:47 | 1       |
| General Chemistry              |                  |      |      |      |   |                |                |         |
| Analyte                        | Result Qualifier | RL   | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Chloride                       | 72.1             | 0.50 | 0.28 | mg/L |   |                | 05/02/13 20:34 | 1       |
| Sulfate                        | 104              | 4.0  | 0.70 | mg/L |   |                | 05/04/13 00:15 | 2       |
| Alkalinity, Total              | 348              | 100  | 40.0 | mg/L |   |                | 05/02/13 16:47 | 10      |

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

**Client Sample ID: Post-Carbon** 

Date Collected: 05/01/13 10:00 Date Received: 05/01/13 10:30

Lab Sample ID: 480-37393-1

**Matrix: Wastewater** 

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| 1,1,1-Trichloroethane       | ND     |           | 1.0 | 0.82 | ug/L |   |          | 05/10/13 13:18 | 1       |
| 1,1,2,2-Tetrachloroethane   | ND     |           | 1.0 | 0.21 | ug/L |   |          | 05/10/13 13:18 | 1       |
| 1,1,2-Trichloroethane       | ND     |           | 1.0 | 0.23 | ug/L |   |          | 05/10/13 13:18 | 1       |
| 1,1-Dichloroethane          | ND     |           | 1.0 | 0.38 | ug/L |   |          | 05/10/13 13:18 | 1       |
| 1,1-Dichloroethene          | ND     |           | 1.0 | 0.29 | ug/L |   |          | 05/10/13 13:18 | 1       |
| 1,2-Dichloroethane          | ND     |           | 1.0 | 0.21 | ug/L |   |          | 05/10/13 13:18 | 1       |
| 1,2-Dichloroethene, Total   | ND     |           | 2.0 | 0.70 | ug/L |   |          | 05/10/13 13:18 | 1       |
| 1,2-Dichloropropane         | ND     |           | 1.0 | 0.72 | ug/L |   |          | 05/10/13 13:18 | 1       |
| 2-Hexanone                  | ND     |           | 5.0 | 1.2  | ug/L |   |          | 05/10/13 13:18 | 1       |
| 2-Butanone (MEK)            | ND     |           | 10  | 1.3  | ug/L |   |          | 05/10/13 13:18 | 1       |
| 4-Methyl-2-pentanone (MIBK) | ND     |           | 5.0 | 2.1  | ug/L |   |          | 05/10/13 13:18 | 1       |
| Acetone                     | 3.3    | J         | 10  | 3.0  | ug/L |   |          | 05/10/13 13:18 | 1       |
| Benzene                     | 90     |           | 1.0 | 0.41 | ug/L |   |          | 05/10/13 13:18 | 1       |
| Bromodichloromethane        | ND     |           | 1.0 | 0.39 | ug/L |   |          | 05/10/13 13:18 | 1       |
| Bromoform                   | ND     |           | 1.0 | 0.26 | ug/L |   |          | 05/10/13 13:18 | 1       |
| Bromomethane                | ND     |           | 1.0 | 0.69 | ug/L |   |          | 05/10/13 13:18 | 1       |
| Carbon disulfide            | ND     |           | 1.0 | 0.19 | ug/L |   |          | 05/10/13 13:18 | 1       |
| Carbon tetrachloride        | ND     |           | 1.0 | 0.27 | ug/L |   |          | 05/10/13 13:18 | 1       |
| Chlorobenzene               | ND     |           | 1.0 | 0.75 | ug/L |   |          | 05/10/13 13:18 | 1       |
| Dibromochloromethane        | ND     |           | 1.0 | 0.32 | ug/L |   |          | 05/10/13 13:18 | 1       |
| Chloroethane                | ND     |           | 1.0 | 0.32 | ug/L |   |          | 05/10/13 13:18 | 1       |
| Chloroform                  | 6.7    |           | 1.0 | 0.34 | ug/L |   |          | 05/10/13 13:18 | 1       |
| Chloromethane               | ND     |           | 1.0 | 0.35 | ug/L |   |          | 05/10/13 13:18 | 1       |
| cis-1,3-Dichloropropene     | ND     |           | 1.0 | 0.36 | ug/L |   |          | 05/10/13 13:18 | 1       |
| Ethylbenzene                | 10     |           | 1.0 | 0.74 | ug/L |   |          | 05/10/13 13:18 | 1       |
| Methylene Chloride          | ND     |           | 1.0 | 0.44 | ug/L |   |          | 05/10/13 13:18 | 1       |
| Styrene                     | ND     |           | 1.0 | 0.73 | ug/L |   |          | 05/10/13 13:18 | 1       |
| Tetrachloroethene           | ND     |           | 1.0 | 0.36 | ug/L |   |          | 05/10/13 13:18 | 1       |
| Toluene                     | 22     |           | 1.0 | 0.51 | ug/L |   |          | 05/10/13 13:18 | 1       |
| trans-1,3-Dichloropropene   | ND     |           | 1.0 | 0.37 | ug/L |   |          | 05/10/13 13:18 | 1       |
| Trichloroethene             | ND     |           | 1.0 | 0.46 | ug/L |   |          | 05/10/13 13:18 | 1       |
| Vinyl chloride              | ND     |           | 1.0 | 0.90 | ug/L |   |          | 05/10/13 13:18 | 1       |
| Vinyl acetate               | ND     |           | 5.0 |      | ug/L |   |          | 05/10/13 13:18 | 1       |
| Xylenes, Total              | 5.2    |           | 2.0 |      | ug/L |   |          | 05/10/13 13:18 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepa | red | Analyzed       | Dil Fac |  |
|------------------------------|-----------|-----------|----------|-------|-----|----------------|---------|--|
| 1,2-Dichloroethane-d4 (Surr) | 102       |           | 66 - 137 |       |     | 05/10/13 13:18 | 1       |  |
| Toluene-d8 (Surr)            | 105       |           | 71 - 126 |       |     | 05/10/13 13:18 | 1       |  |
| 4-Bromofluorobenzene (Surr)  | 106       |           | 73 - 120 |       |     | 05/10/13 13:18 | 1       |  |

D

Prepared

| Method: 8021B - Volatile Organic Compounds (GC) |        |           |      |       |      |  |
|---|--------|-----------|------|-------|------|--|
| Analyte   | Result | Qualifier | RL   | MDL   | Unit |  |
| 1,2,4-Trimethylbenzene                          | ND     |           | 0.20 | 0.035 | ug/L |  |
| 1,3,5-Trimethylbenzene                          | ND     |           | 0.20 | 0.15  | ug/L |  |
| · ·   |        |           |      |       |      |  |

| 1,2,4-Trimethylbenzene  | ND  | 0.20 | 0.035 ug/L | 05/06/13 11:47 1 |
|-------------------------|-----|------|------------|------------------|
| 1,3,5-Trimethylbenzene  | ND  | 0.20 | 0.15 ug/L  | 05/06/13 11:47 1 |
| Benzene                 | 130 | 1.0  | 0.12 ug/L  | 05/06/13 13:13 5 |
| Ethylbenzene            | 13  | 0.20 | 0.029 ug/L | 05/06/13 11:47 1 |
| Isopropylbenzene        | ND  | 0.20 | 0.027 ug/L | 05/06/13 11:47 1 |
| Methyl tert-butyl ether | ND  | 0.40 | 0.044 ug/L | 05/06/13 11:47 1 |
| m,p-Xylene              | 4.2 | 0.40 | 0.054 ug/L | 05/06/13 11:47 1 |
| n-Butylbenzene          | ND  | 0.20 | 0.031 ug/L | 05/06/13 11:47 1 |

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Analyzed

Page 7 of 16

# **Client Sample Results**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-37392-1

**Client Sample ID: Post-Carbon** 

Date Collected: 05/01/13 10:00 Date Received: 05/01/13 10:30 Lab Sample ID: 480-37393-1

**Matrix: Wastewater** 

| Analyte  | Result                  | Qualifier   | RL             | MDL         | Unit         | D        | Prepared                 | Analyzed                 | Dil Fac |
|--|-------------------------|-------------|----------------|-------------|--------------|----------|--------------------------|--------------------------|---------|
| n-Propylbenzene  | ND                      |             | 0.20           | 0.13        | ug/L         |          |                          | 05/06/13 11:47           | 1       |
| o-Xylene   | 2.6                     |             | 0.20           | 0.027       | ug/L         |          |                          | 05/06/13 11:47           | 1       |
| p-Cymene   | ND                      |             | 0.20           | 0.030       | ug/L         |          |                          | 05/06/13 11:47           | 1       |
| sec-Butylbenzene   | ND                      |             | 0.20           | 0.020       | ug/L         |          |                          | 05/06/13 11:47           | 1       |
| Toluene  | 29                      |             | 0.20           | 0.036       | ug/L         |          |                          | 05/06/13 11:47           | 1       |
| Xylenes, Total   | 8.2                     |             | 0.60           | 0.054       | ug/L         |          |                          | 05/06/13 11:47           | 1       |
|  | • •                     |             |                |             |              |          |                          |                          |         |
| Method: 200.7 Rev 4.4 - Metal  | s (ICP)                 |             |                |             |              |          |                          |                          |         |
| Analyte  | • •                     | Qualifier - | <b>RL</b> 50.0 | MDL<br>19.3 | Unit<br>ug/L | <u>D</u> | Prepared 05/02/13 10:50  | Analyzed 05/02/13 22:45  | Dil Fac |
| Method: 200.7 Rev 4.4 - Metal<br>Analyte<br>Iron<br>General Chemistry<br>Analyte | Result 435              | Qualifier   |                | 19.3        |              | <u>D</u> |                          |                          | Dil Fac |
| Analyte Iron General Chemistry Analyte   | Result 435              |             | 50.0           | 19.3        | ug/L<br>Unit |          | 05/02/13 10:50           | 05/02/13 22:45           | 1       |
| Analyte Iron General Chemistry   | Result 435  Result 0.20 |             | 50.0           | 19.3        | ug/L<br>Unit |          | 05/02/13 10:50  Prepared | 05/02/13 22:45  Analyzed | 1       |

## **Lab Chronicle**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-37392-1

Lab Sample ID: 480-37392-1

Matrix: Wastewater

Client Sample ID: Pre-Carbon Date Collected: 05/01/13 10:10

Date Received: 05/01/13 10:30

|           | Batch    | Batch         |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|---------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method        | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Prep     | 200.7         |     |          | 116379 | 05/02/13 10:50 | SS      | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |     | 1        | 116596 | 05/02/13 22:47 | LH      | TAL BUF |
| Total/NA  | Analysis | 300.0         |     | 1        | 116466 | 05/02/13 20:34 | KC      | TAL BUF |
| Total/NA  | Analysis | 310.2         |     | 10       | 116572 | 05/02/13 16:47 | LK      | TAL BUF |
| Total/NA  | Analysis | 300.0         |     | 2        | 116746 | 05/04/13 00:15 | KC      | TAL BUF |

Client Sample ID: Post-Carbon Lab Sample ID: 480-37393-1

Date Collected: 05/01/13 10:00 Matrix: Wastewater

Date Collected: 05/01/13 10:00 Matrix: Wastewater Date Received: 05/01/13 10:30

|           | Batch    | Batch         |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|---------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method        | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8260B         |     | 1        | 117857 | 05/10/13 13:18 | RL      | TAL BUF |
| Total/NA  | Analysis | 8021B         |     | 1        | 116886 | 05/06/13 11:47 | DB      | TAL BUF |
| Total/NA  | Analysis | 8021B         |     | 5        | 116886 | 05/06/13 13:13 | DB      | TAL BUF |
| Total/NA  | Prep     | 200.7         |     |          | 116379 | 05/02/13 10:50 | SS      | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |     | 1        | 116596 | 05/02/13 22:45 | LH      | TAL BUF |
| Total/NA  | Analysis | SM 4500 H+ B  |     | 1        | 116291 | 05/02/13 01:18 | KS      | TAL BUF |
| Total/NA  | Prep     | Distill/CN    |     |          | 116717 | 05/03/13 13:01 | KWJ     | TAL BUF |
| Total/NA  | Analysis | 335.4         |     | 1        | 116855 | 05/04/13 18:34 | KS      | TAL BUF |

#### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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TestAmerica Job ID: 480-37392-1

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

## Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority         | Program       | EPA Region | Certification ID | <b>Expiration Date</b> |
|-------------------|---------------|------------|------------------|------------------------|
| Arkansas DEQ      | State Program | 6          | 88-0686          | 07-06-13               |
| California        | NELAP         | 9          | 1169CA           | 09-30-13               |
| Connecticut       | State Program | 1          | PH-0568          | 09-30-14               |
| Florida           | NELAP         | 4          | E87672           | 06-30-13               |
| Georgia           | State Program | 4          | N/A              | 03-31-14               |
| Georgia           | State Program | 4          | 956              | 06-30-13               |
| Georgia           | State Program | 4          | 956              | 03-31-14               |
| Illinois          | NELAP         | 5          | 200003           | 09-30-13               |
| lowa              | State Program | 7          | 374              | 03-15-15               |
| Kansas            | NELAP         | 7          | E-10187          | 01-31-14               |
| Kentucky          | State Program | 4          | 90029            | 12-31-13               |
| Kentucky (UST)    | State Program | 4          | 30               | 04-01-14               |
| Louisiana         | NELAP         | 6          | 02031            | 06-30-13               |
| Maine             | State Program | 1          | NY00044          | 12-04-13               |
| Maryland          | State Program | 3          | 294              | 03-31-14               |
| Massachusetts     | State Program | 1          | M-NY044          | 06-30-13               |
| Michigan          | State Program | 5          | 9937             | 04-01-13 *             |
| Minnesota         | NELAP         | 5          | 036-999-337      | 12-31-13               |
| New Hampshire     | NELAP         | 1          | 2973             | 09-11-13               |
| New Hampshire     | NELAP         | 1          | 2337             | 11-17-13               |
| New Jersey        | NELAP         | 2          | NY455            | 06-30-13               |
| New York          | NELAP         | 2          | 10026            | 04-01-14               |
| North Dakota      | State Program | 8          | R-176            | 03-31-14               |
| Oklahoma          | State Program | 6          | 9421             | 08-31-13               |
| Oregon            | NELAP         | 10         | NY200003         | 06-09-13               |
| Pennsylvania      | NELAP         | 3          | 68-00281         | 07-31-13               |
| Rhode Island      | State Program | 1          | LAO00328         | 12-31-13               |
| Tennessee         | State Program | 4          | TN02970          | 04-01-14               |
| Texas             | NELAP         | 6          | T104704412-11-2  | 07-31-13               |
| USDA              | Federal       |            | P330-11-00386    | 11-22-14               |
| Virginia          | NELAP         | 3          | 460185           | 09-14-13               |
| Washington        | State Program | 10         | C784             | 02-10-14               |
| West Virginia DEP | State Program | 3          | 252              | 09-30-13               |
| Wisconsin         | State Program | 5          | 998310390        | 08-31-13               |

TestAmerica Buffalo

<sup>\*</sup> Expired certification is currently pending renewal and is considered valid.

# **Method Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-37392-1

| Method        | Method Description                 | Protocol | Laboratory |
|---------------|------------------------------------|----------|------------|
| 8260B         | Volatile Organic Compounds (GC/MS) | SW846    | TAL BUF    |
| 8021B         | Volatile Organic Compounds (GC)    | SW846    | TAL BUF    |
| 200.7 Rev 4.4 | Metals (ICP)                       | EPA      | TAL BUF    |
| 300.0         | Anions, Ion Chromatography         | MCAWW    | TAL BUF    |
| 310.2         | Alkalinity                         | MCAWW    | TAL BUF    |
| 335.4         | Cyanide, Total                     | MCAWW    | TAL BUF    |
| SM 4500 H+ B  | pH                                 | SM       | TAL BUF    |

#### **Protocol References:**

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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# **Sample Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-37392-1

| Lab Sample ID | Client Sample ID | Matrix     | Collected      | Received       |
|---------------|------------------|------------|----------------|----------------|
| 480-37392-1   | Pre-Carbon       | Wastewater | 05/01/13 10:10 | 05/01/13 10:30 |
| 480-37393-1   | Post-Carbon      | Wastewater | 05/01/13 10:00 | 05/01/13 10:30 |

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### TestAmerica Buffalo

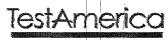
10 Hazelwood Drive

## **Chain of Custody Record**

| ******* | *     |
|---------|-------|
| lestAm  | ierca |
|         |       |

Amherst, NY 14228-2298 THE LEADER IN EXTROMINENTAL TESTING Phone (716) 691-2600 Fax (716) 691-7991 Carrier Tracking No(s): 480-30375-1176.1 Fischer, Brian Client Information Client Contact E-Mail: 2302 Page 1 of 1 Thomas Palmer brian.fischer@testamericainc.com Company: 486-37392 **Analysis Requested** Groundwater & Environmental Services Inc Address: Due Date Requested: Preservation Codes: 495 Aero Drive Suite 3 M - Hexane TAT Requested (days): B - NaOH N - None Cheektowaga O - AsNaO2 C - Zn Acetate P - Na204S D - Nitric Acid State, Zip: Q - Na2SO3 E - NaHSO4 NY, 14225 F - MeOH R - Na2S2SO3 Phone: G - Amchlor S-H2SO4 Purchase Order not requir H - Ascorbic Acid T - TSP Dodecahydrate U - Acetone I-ice Email: WO #: V-MCAA J - DI Water supplied in the second tpalmer@gesonline.com K-EDTA W-ph 4-5 Project Name Project #: L-EDA Z - other (specify) NYSDEC - Gastown WWTP/Gastown Event Desc: Mthly Pre-Carl 48002525 SSOW#: New York Matrix Sample Type S=solid, Sample (C=comp, G=grab) Sample Identification Sample Date Time Special Instructions/Note: Preservation Code: G Water Pre-Carbon 1010 480-37392 Chain of Custody Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Non-Hazard Flammable Unknown Radiological Return To Client Disposal By Lab Archive For Skin Irritant Deliverable Requested: I, II, III, IV, Other (specify) Special Instructions/QC Requirements: Time: Method of Shipment Empty Kit Relinquished by: Date: Relinquished by: Company Relinquished by: Date/Time: Company Date/Time: Relinquished by: Date/Time: Company Custody Seals Intact: Custody Seal No .: Cooler Temperature(s) °C and Other Remarks: Δ Yes Δ NoAmherst, NY 14228-2298 Phone (716) 691-2600 Fax (716) 691-7991

# **Chain of Custody Record**



SE LEADED OF ENVIRONMENTAL TERRIDA

| Official Landscape Comments   | Sampler ()                                       | Lab PM:<br>Fischer, Brian   | Carrier Tracking No(s):  | COC No:<br>480-30384-1177.1  |
|---|--|---|--|--|
| Client Information Client Contact   | Phone:   | E-Mail:   |  | Page:  |
| Thomas Palmer   | 484 645 230Z                                     | brian.fischer@testamericainc.com  |  | Page 1 of 1  |
| Company: Groundwater & Environmental Services Inc   |  | Analysis Re   | auested  | Job #:   |
| Address:  | Due Date Requested:                              | 2.4 Rem   |  | Preservation Codes:  |
| 495 Aero Drive Suite 3  | TATR   |   |  | A-HCL M-Hexane   |
| City: Cheektowaga   | TAT Requested (days):                            |   | l l l l l l l l l l l l l l l l l l l  | B - NaOH N - None<br>C - Zn Acetate O - AşNaO2   |
| State, Zip:   | 510;   |   |  | D - Nitric Acid P - Na2O4S;<br>E - NaHSO4 Q - Na2SO3   |
| NY, 14225<br>Phone:   | PO#:   |   |  | F - MeOH R - Na2S2S03<br>G - Amchlor S - H2SO4   |
|   | Purchase Order not requir                        |   |  | H - Ascorbic Acid T - TSP Dodecahydrate  |
| Email:<br>tpalmer@gesonline.com   | WO#:   | Or Noj  |  | I - Ice U - Acetone<br>J - Di Water V - MCAA   |
| Project Name:   | Project #:                                       | G(Yes or<br>GE, O(No)   |  | K-EDTA W-ph 4-5<br>L-EDA Z-other (specify)   |
| NYSDEC - Gastown WWTP/Gastown Event Desc: Mthly Post-C Site:                                    | a 48002525<br>SSOW#:                             | mple state of the | siegijes   | Other:   |
| New York  | 0001181  | STAR 1 TCL  |  |  |
|   | Sample   |   | Total Number   |  |
|   | Type (   | Matrix    Second  |  | <b>]</b>   |
| Sample Identification   | Sample (C=comp, o=                               | SSNE V=VILLE (1992)   |  | Special Instructions/Note:   |
| Sample identification   | Preservation                                     |   |  | Opecial insulactions with  |
| Post-Carbon   | 5/1/13 1000 G V                                  | Water NN  | 3 1.0 HIADA C. STOWNS C. S.  |  |
|   | 5/1/13 1000 6                                    |   | 10 m / m / m / m / m / m / m / m / m / m   |  |
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|   |  |   | 480-37393 Chain of Cust  | tody   |
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|   |  |   |  |  |
|   |  | <del></del>   | \$1.00 to \$1. |  |
|   | <u> </u>   |   | ŽiSen  | 1  |
| Possible Hazard Identification  | n B Junknown Radiological                        | Sample Disposal ( A fee may be a  | ssessed if samples are retained  | longer than 1 month)   |
| Non-Hazard Flammable Skin Irritant Poiso Deliverable Requested: I, II, III, IV, Other (specify) | n B Junknown Radiological                        | Return To Client  Special Instructions/QC Requirement   | Disposal By Lab Archive  | e For Months   |
|   |  |   |  |  |
| Empty Kit Relinquished by:  | Date:  | Time:   | Method of Shipment:  |  |
| Relinquished by:  | Date/Time: ///3 /030 Com                         | party Received by: July   | Date/Time:   | 1030 Company THE BIRAC   |
| Relinquished by:  |  | pany Regeived by:   | Date/Time:   | Company  |
| Relinquished by:  | Date/Time: Com                                   | pany (Received by:  | Date/Time:   | Company  |
|   | 3311   |   |  |  |
| Custody Seals Intact: Custody Seal No.:   |  | Cooler Temperature(s) °C and Other R  | emarks:  | 7.6/Notce  |
| Δ Yes Δ No  |  |   |  | 1 U 1 /1 U 5 U 1   |

# Login Sample Receipt Checklist

Client: New York State D.E.C. Job Number: 480-37392-1

Login Number: 37392 List Source: TestAmerica Buffalo

List Number: 1
Creator: Kolb, Chris M

| Creator: Kolb, Chris M   |        |  |
|--|--------|--|
| Question   | Answer | Comment  |
| Radioactivity either was not measured or, if measured, is at or below background | True   |  |
| The cooler's custody seal, if present, is intact.                                | True   |  |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |  |
| Samples were received on ice.  | False  |  |
| Cooler Temperature is acceptable.  | False  | Yes: Received same day of collection; chilling process has begun |
| Cooler Temperature is recorded.  | True   |  |
| COC is present.  | True   |  |
| COC is filled out in ink and legible.  | True   |  |
| COC is filled out with all pertinent information.                                | True   |  |
| Is the Field Sampler's name present on COC?                                      | True   |  |
| There are no discrepancies between the sample IDs on the containers and the COC. | True   |  |
| Samples are received within Holding Time.  | True   |  |
| Sample containers have legible labels.   | True   |  |
| Containers are not broken or leaking.  | True   |  |
| Sample collection date/times are provided.                                       | True   |  |
| Appropriate sample containers are used.  | True   |  |
| Sample bottles are completely filled.  | True   |  |
| Sample Preservation Verified   | True   |  |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |  |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | N/A    |  |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True   |  |
| Multiphasic samples are not present.   | True   |  |
| Samples do not require splitting or compositing.                                 | True   |  |
| Sampling Company provided.   | True   |  |
| Samples received within 48 hours of sampling.                                    | True   |  |
| Samples requiring field filtration have been filtered in the field.              | True   |  |
| Chlorine Residual checked.   | True   |  |

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## Login Sample Receipt Checklist

Client: New York State D.E.C. Job Number: 480-37392-1

List Source: TestAmerica Buffalo

List Number: 1 Creator: Kolb, Chris M

the COC.

MS/MSDs

diameter.

needs

Samples are received within Holding Time.

Sample collection date/times are provided.

Appropriate sample containers are used.

Sample containers have legible labels.

Containers are not broken or leaking.

Sample bottles are completely filled.

Multiphasic samples are not present.

Sampling Company provided.

Chlorine Residual checked.

Samples do not require splitting or compositing.

Samples received within 48 hours of sampling.

Samples requiring field filtration have been filtered in the field.

Sample Preservation Verified

Login Number: 37393

There are no discrepancies between the sample IDs on the containers and

There is sufficient vol. for all requested analyses, incl. any requested

VOA sample vials do not have headspace or bubble is <6mm (1/4") in

If necessary, staff have been informed of any short hold time or quick TAT

Question Answer Comment Radioactivity either was not measured or, if measured, is at or below True background The cooler's custody seal, if present, is intact. True The cooler or samples do not appear to have been compromised or True tampered with. Samples were received on ice. True Cooler Temperature is acceptable. True Cooler Temperature is recorded. True COC is present. True COC is filled out in ink and legible. True COC is filled out with all pertinent information. True Is the Field Sampler's name present on COC? True

True

True

True

True

True

True

True

True

True

True

True

True True

True

True

True

N/A



THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo 10 Hazelwood Drive Amherst, NY 14228-2298 Tel: (716)691-2600

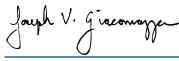
TestAmerica Job ID: 480-38451-1

Client Project/Site: NYSDEC-Gastown WWTP: Site# 915171

### For:

New York State D.E.C. 270 Michigan Avenue Buffalo, New York 14203

Attn: Mr. Glenn May



Authorized for release by: 5/21/2013 4:55:29 PM
Joe Giacomazza, Project Administrator joe.giacomazza@testamericainc.com

Designee for

Brian Fischer, Project Manager II brian fischer@testamericainc.com

·····LINKS ······

Review your project results through

Total Access

**Have a Question?** 



Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Joseph V. gireonoge

Joe Giacomazza Project Administrator 5/21/2013 4:55:29 PM

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Project/Site: NYSDEC-Gastown WWTP: Site# 915171

# **Table of Contents**

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# **Definitions/Glossary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Reporting Limit or Requested Limit (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Toxicity Equivalent Quotient (Dioxin)

Relative Percent Difference, a measure of the relative difference between two points

TestAmerica Job ID: 480-38451-1

## **Qualifiers**

## **GC VOA**

| Qualifier | Qualifier Description  |
|-----------|--|
| J         | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## **Glossary**

RL

RPD TEF

TEQ

| Abbreviation   | These commonly used abbreviations may or may not be present in this report.                                 |
|----------------|---|
| ¤              | Listed under the "D" column to designate that the result is reported on a dry weight basis                  |
| %R             | Percent Recovery  |
| CNF            | Contains no Free Liquid   |
| DER            | Duplicate error ratio (normalized absolute difference)  |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC            | Decision level concentration  |
| MDA            | Minimum detectable activity   |
| EDL            | Estimated Detection Limit   |
| MDC            | Minimum detectable concentration  |
| MDL            | Method Detection Limit  |
| ML             | Minimum Level (Dioxin)  |
| ND             | Not detected at the reporting limit (or MDL or EDL if shown)  |
| PQL            | Practical Quantitation Limit  |
| QC             | Quality Control   |
| RER            | Relative error ratio  |

#### **Case Narrative**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-38451-1

Job ID: 480-38451-1

**Laboratory: TestAmerica Buffalo** 

Narrative

Job Narrative 480-38451-1

#### Receipt

The samples were received on 5/16/2013 5:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8° C.

#### GC/MS VOA

No analytical or quality issues were noted.

#### GC VOA

Method(s) 8021B: The following samples were diluted to bring the concentration of target analytes within the calibration range: Carbon 1 Effluent (480-38451-3), Carbon 2 Effluent (480-38451-2), Influent (480-38451-4). Elevated reporting limits (RLs) are provided.

Method(s) 8021B: The following sample was diluted to bring the concentration of target analytes within the calibration range: (480-38451-3 MS), (480-38451-3 MSD), Carbon 1 Effluent (480-38451-3). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

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Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-38451-1

Lab Sample ID: 480-38451-1

Matrix: Water

### Client Sample ID: Carbon 3 Effluent

Date Collected: 05/16/13 16:10 Date Received: 05/16/13 17:00

| Analyte                 | Result Qualifier    | RL       | MDL   | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------|---------------------|----------|-------|------|---|----------|----------------|---------|
| 1,2,4-Trimethylbenzene  | ND ND               | 0.20     | 0.035 | ug/L |   |          | 05/20/13 19:57 | 1       |
| 1,3,5-Trimethylbenzene  | ND                  | 0.20     | 0.15  | ug/L |   |          | 05/20/13 19:57 | 1       |
| Benzene                 | ND                  | 0.20     | 0.023 | ug/L |   |          | 05/20/13 19:57 | 1       |
| Ethylbenzene            | ND                  | 0.20     | 0.029 | ug/L |   |          | 05/20/13 19:57 | 1       |
| Isopropylbenzene        | ND                  | 0.20     | 0.027 | ug/L |   |          | 05/20/13 19:57 | 1       |
| Methyl tert-butyl ether | ND                  | 0.40     | 0.044 | ug/L |   |          | 05/20/13 19:57 | 1       |
| m,p-Xylene              | ND                  | 0.40     | 0.054 | ug/L |   |          | 05/20/13 19:57 | 1       |
| n-Butylbenzene          | ND                  | 0.20     | 0.031 | ug/L |   |          | 05/20/13 19:57 | 1       |
| n-Propylbenzene         | ND                  | 0.20     | 0.13  | ug/L |   |          | 05/20/13 19:57 | 1       |
| o-Xylene                | ND                  | 0.20     | 0.027 | ug/L |   |          | 05/20/13 19:57 | 1       |
| p-Cymene                | ND                  | 0.20     | 0.030 | ug/L |   |          | 05/20/13 19:57 | 1       |
| sec-Butylbenzene        | ND                  | 0.20     | 0.020 | ug/L |   |          | 05/20/13 19:57 | 1       |
| Toluene                 | ND                  | 0.20     | 0.036 | ug/L |   |          | 05/20/13 19:57 | 1       |
| Xylenes, Total          | ND                  | 0.60     | 0.054 | ug/L |   |          | 05/20/13 19:57 | 1       |
| Surrogate               | %Recovery Qualifier | Limits   |       |      |   | Prepared | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene  |                     | 63 - 145 |       |      | - |          | 05/20/13 19:57 | 1       |
| 4-Bromofluorobenzene    | 111                 | 64 - 141 |       |      |   |          | 05/20/13 19:57 | 1       |

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-38451-1

Lab Sample ID: 480-38451-2

Matrix: Water

Client Sample ID: Carbon 2 Effluent

Date Collected: 05/16/13 16:15 Date Received: 05/16/13 17:00

| Analyte                 | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,2,4-Trimethylbenzene  | ND        |           | 1.0      | 0.17 | ug/L |   |          | 05/20/13 20:31 | 5       |
| 1,3,5-Trimethylbenzene  | ND        |           | 1.0      | 0.75 | ug/L |   |          | 05/20/13 20:31 | 5       |
| Benzene                 | 140       |           | 1.0      | 0.12 | ug/L |   |          | 05/20/13 20:31 | 5       |
| Ethylbenzene            | 11        |           | 1.0      | 0.14 | ug/L |   |          | 05/20/13 20:31 | 5       |
| Isopropylbenzene        | ND        |           | 1.0      | 0.14 | ug/L |   |          | 05/20/13 20:31 | 5       |
| Methyl tert-butyl ether | ND        |           | 2.0      | 0.22 | ug/L |   |          | 05/20/13 20:31 | 5       |
| m,p-Xylene              | 5.1       |           | 2.0      | 0.27 | ug/L |   |          | 05/20/13 20:31 | 5       |
| n-Butylbenzene          | ND        |           | 1.0      | 0.15 | ug/L |   |          | 05/20/13 20:31 | 5       |
| n-Propylbenzene         | ND        |           | 1.0      | 0.65 | ug/L |   |          | 05/20/13 20:31 | 5       |
| o-Xylene                | 0.63      | J         | 1.0      | 0.14 | ug/L |   |          | 05/20/13 20:31 | 5       |
| p-Cymene                | ND        |           | 1.0      | 0.15 | ug/L |   |          | 05/20/13 20:31 | 5       |
| sec-Butylbenzene        | ND        |           | 1.0      | 0.10 | ug/L |   |          | 05/20/13 20:31 | 5       |
| Toluene                 | 39        |           | 1.0      | 0.18 | ug/L |   |          | 05/20/13 20:31 | 5       |
| Surrogate               | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene  | 113       |           | 63 - 145 |      |      | - |          | 05/20/13 20:31 | 5       |
| 4-Bromofluorobenzene    | 113       |           | 64 - 141 |      |      |   |          | 05/20/13 20:31 | 5       |

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Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-38451-1

Client Sample ID: Carbon 1 Effluent

Date Collected: 05/16/13 16:20 Date Received: 05/16/13 17:00

**Toluene** 

Surrogate

**Xylenes, Total** 

a,a,a-Trifluorotoluene

4-Bromofluorobenzene

Lab Sample ID: 480-38451-3

. Matrix: Water

| Analyte                           | Result           | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------------|------------------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,2,4-Trimethylbenzene            | 17               |           | 4.0      | 0.69 | ug/L |   |          | 05/20/13 21:05 | 20      |
| 1,3,5-Trimethylbenzene            | ND               |           | 4.0      | 3.0  | ug/L |   |          | 05/20/13 21:05 | 20      |
| Ethylbenzene                      | 300              |           | 4.0      | 0.57 | ug/L |   |          | 05/20/13 21:05 | 20      |
| Isopropylbenzene                  | ND               |           | 4.0      | 0.54 | ug/L |   |          | 05/20/13 21:05 | 20      |
| Methyl tert-butyl ether           | ND               |           | 8.0      | 0.87 | ug/L |   |          | 05/20/13 21:05 | 20      |
| m,p-Xylene                        | 210              |           | 8.0      | 1.1  | ug/L |   |          | 05/20/13 21:05 | 20      |
| n-Butylbenzene                    | ND               |           | 4.0      | 0.62 | ug/L |   |          | 05/20/13 21:05 | 20      |
| n-Propylbenzene                   | ND               |           | 4.0      | 2.6  | ug/L |   |          | 05/20/13 21:05 | 20      |
| o-Xylene                          | 200              |           | 4.0      | 0.54 | ug/L |   |          | 05/20/13 21:05 | 20      |
| p-Cymene                          | ND               |           | 4.0      | 0.59 | ug/L |   |          | 05/20/13 21:05 | 20      |
| sec-Butylbenzene                  | ND               |           | 4.0      | 0.41 | ug/L |   |          | 05/20/13 21:05 | 20      |
| Surrogate                         | %Recovery        | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene            | 110              |           | 63 - 145 |      |      | _ |          | 05/20/13 21:05 | 20      |
| 4-Bromofluorobenzene              | 113              |           | 64 - 141 |      |      |   |          | 05/20/13 21:05 | 20      |
| -<br>Method: 8021B - Volatile Org | anic Compounds ( | (GC) - DL |          |      |      |   |          |                |         |
| Analyte                           |                  | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
| Benzene                           | 2700             |           |          | 2.3  | ug/L |   |          | 05/21/13 11:29 | 100     |

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Limits

63 - 145

64 - 141

960

180

92

98

Qualifier

%Recovery

3.6 ug/L

5.4 ug/L

TestAmerica Buffalo

100

100

100

100

Dil Fac

05/21/13 11:29

05/21/13 11:29

Analyzed

05/21/13 11:29

05/21/13 11:29

Prepared

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-38451-1

Lab Sample ID: 480-38451-4

Matrix: Water

**Client Sample ID: Influent** Date Collected: 05/16/13 16:25

Date Received: 05/16/13 17:00

| Analyte                 | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------|--------|-----------|----|-----|------|---|----------|----------------|---------|
| 1,2,4-Trimethylbenzene  | ND     |           | 20 | 3.5 | ug/L |   |          | 05/20/13 21:39 | 100     |
| 1,3,5-Trimethylbenzene  | ND     |           | 20 | 15  | ug/L |   |          | 05/20/13 21:39 | 100     |
| Benzene                 | 3100   |           | 20 | 2.3 | ug/L |   |          | 05/20/13 21:39 | 100     |
| Ethylbenzene            | 280    |           | 20 | 2.9 | ug/L |   |          | 05/20/13 21:39 | 100     |
| Isopropylbenzene        | ND     |           | 20 | 2.7 | ug/L |   |          | 05/20/13 21:39 | 100     |
| Methyl tert-butyl ether | ND     |           | 40 | 4.4 | ug/L |   |          | 05/20/13 21:39 | 100     |
| m,p-Xylene              | 190    |           | 40 | 5.4 | ug/L |   |          | 05/20/13 21:39 | 100     |
| n-Butylbenzene          | ND     |           | 20 | 3.1 | ug/L |   |          | 05/20/13 21:39 | 100     |
| n-Propylbenzene         | ND     |           | 20 | 13  | ug/L |   |          | 05/20/13 21:39 | 100     |
| o-Xylene                | 22     |           | 20 | 2.7 | ug/L |   |          | 05/20/13 21:39 | 100     |
| p-Cymene                | ND     |           | 20 | 3.0 | ug/L |   |          | 05/20/13 21:39 | 100     |
| sec-Butylbenzene        | ND     |           | 20 | 2.0 | ug/L |   |          | 05/20/13 21:39 | 100     |
| Toluene                 | 1200   |           | 20 | 3.6 | ug/L |   |          | 05/20/13 21:39 | 100     |

| Surrogate              | %Recovery | Qualifier | Limits   | Prep | pared | Analyzed       | Dil Fac |  |
|------------------------|-----------|-----------|----------|------|-------|----------------|---------|--|
| a,a,a-Trifluorotoluene | 111       |           | 63 - 145 |      |       | 05/20/13 21:39 | 100     |  |
| 4-Bromofluorobenzene   | 111       |           | 64 - 141 |      |       | 05/20/13 21:39 | 100     |  |

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Lab Sample ID: 480-38451-1

TestAmerica Job ID: 480-38451-1

Matrix: Water

Date Collected: 05/16/13 16:10

**Client Sample ID: Carbon 3 Effluent** 

Date Received: 05/16/13 17:00

|           | Batch    | Batch  |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|--------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8021B  |     |          | 119622 | 05/20/13 19:57 | DB      | TAL BUF |

Client Sample ID: Carbon 2 Effluent Lab Sample ID: 480-38451-2

Date Collected: 05/16/13 16:15 Matrix: Water

Date Received: 05/16/13 17:00

|           | Batch    | Batch  |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|--------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Туре     | Method | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8021B  |     |          | 119622 | 05/20/13 20:31 | DB      | TAL BUF |

**Client Sample ID: Carbon 1 Effluent** Lab Sample ID: 480-38451-3

Date Collected: 05/16/13 16:20 Matrix: Water

Date Received: 05/16/13 17:00

|           | Batch    | Batch  |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|--------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8021B  |     | 20       | 119622 | 05/20/13 21:05 | DB      | TAL BUF |
| Total/NA  | Analysis | 8021B  | DL  | 100      | 119715 | 05/21/13 11:29 | DB      | TAL BUF |

**Client Sample ID: Influent** Lab Sample ID: 480-38451-4

Date Collected: 05/16/13 16:25 Matrix: Water

Date Received: 05/16/13 17:00

|           | Batch    | Batch  |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|--------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Туре     | Method | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8021B  |     | 100      | 119622 | 05/20/13 21:39 | DB      | TAL BUF |

**Laboratory References:** 

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TestAmerica Job ID: 480-38451-1

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

### Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority         | Program       | EPA Region | Certification ID | Expiration Date |
|-------------------|---------------|------------|------------------|-----------------|
| Arkansas DEQ      | State Program | 6          | 88-0686          | 07-06-13        |
| California        | NELAP         | 9          | 1169CA           | 09-30-13        |
| Connecticut       | State Program | 1          | PH-0568          | 09-30-14        |
| Florida           | NELAP         | 4          | E87672           | 06-30-13        |
| Georgia           | State Program | 4          | N/A              | 03-31-14        |
| Georgia           | State Program | 4          | 956              | 06-30-13        |
| Georgia           | State Program | 4          | 956              | 03-31-14        |
| Illinois          | NELAP         | 5          | 200003           | 09-30-13        |
| Iowa              | State Program | 7          | 374              | 03-15-15        |
| Kansas            | NELAP         | 7          | E-10187          | 01-31-14        |
| Kentucky          | State Program | 4          | 90029            | 12-31-13        |
| Kentucky (UST)    | State Program | 4          | 30               | 04-01-14        |
| Louisiana         | NELAP         | 6          | 02031            | 06-30-13        |
| Maine             | State Program | 1          | NY00044          | 12-04-13        |
| Maryland          | State Program | 3          | 294              | 03-31-14        |
| Massachusetts     | State Program | 1          | M-NY044          | 06-30-13        |
| Michigan          | State Program | 5          | 9937             | 04-01-13 *      |
| Minnesota         | NELAP         | 5          | 036-999-337      | 12-31-13        |
| New Hampshire     | NELAP         | 1          | 2973             | 09-11-13        |
| New Hampshire     | NELAP         | 1          | 2337             | 11-17-13        |
| New Jersey        | NELAP         | 2          | NY455            | 06-30-13        |
| New York          | NELAP         | 2          | 10026            | 04-01-14        |
| North Dakota      | State Program | 8          | R-176            | 03-31-14        |
| Oklahoma          | State Program | 6          | 9421             | 08-31-13        |
| Oregon            | NELAP         | 10         | NY200003         | 06-09-13        |
| Pennsylvania      | NELAP         | 3          | 68-00281         | 07-31-13        |
| Rhode Island      | State Program | 1          | LAO00328         | 12-31-13        |
| Tennessee         | State Program | 4          | TN02970          | 04-01-14        |
| Texas             | NELAP         | 6          | T104704412-11-2  | 07-31-13        |
| USDA              | Federal       |            | P330-11-00386    | 11-22-14        |
| Virginia          | NELAP         | 3          | 460185           | 09-14-13        |
| Washington        | State Program | 10         | C784             | 02-10-14        |
| West Virginia DEP | State Program | 3          | 252              | 09-30-13        |
| Wisconsin         | State Program | 5          | 998310390        | 08-31-13        |

<sup>\*</sup> Expired certification is currently pending renewal and is considered valid.

## **Method Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-38451-1

| Method | Method Description              | Protocol | Laboratory |
|--------|---------------------------------|----------|------------|
| 8021B  | Volatile Organic Compounds (GC) | SW846    | TAL BUF    |

#### **Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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## **Sample Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-38451-1

| Lab Sample ID | Client Sample ID  | Matrix | Collected      | Received       |
|---------------|-------------------|--------|----------------|----------------|
| 480-38451-1   | Carbon 3 Effluent | Water  | 05/16/13 16:10 | 05/16/13 17:00 |
| 480-38451-2   | Carbon 2 Effluent | Water  | 05/16/13 16:15 | 05/16/13 17:00 |
| 480-38451-3   | Carbon 1 Effluent | Water  | 05/16/13 16:20 | 05/16/13 17:00 |
| 480-38451-4   | Influent          | Water  | 05/16/13 16:25 | 05/16/13 17:00 |

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## Chain of Custody Record

Temperature on Receipt \_\_\_

<u>TestAmerica</u>

| Drinking Water? | Yes□ | No□ |
|-----------------|------|-----|
|-----------------|------|-----|

THE LEADER IN ENVIRONMENTAL TESTING

| TAL-4124 (1007)  Client NVc N ( ( )  | Project Manager    |                  |                                |             | Date C 11 17                                 | Chain of Custody Number        |
|--|--------------------|------------------|--------------------------------|-------------|--|--------------------------------|
| Misuec Resun 9   |                    | in Man           | <b>`</b>                       |             | Date 5-16-13                                 | Chain of Custody Number 198971 |
| Address 270 Michigan Ane   |                    | ner (Area Code)# | Fax Number<br>7770             |             | Lab Number                                   | Page of                        |
| City Buttalia State 14203  | Site Conject       | (645) 4          | ab Contact                     |             | alysis (Attach list if<br>e space is needed) |                                |
| Project Name and Location (State)  | Carrier/Waybill N  | lumber           |                                | 150A72      |  | Special Instructions/          |
| Contract/Purchase Order/Quote No. Propert # 4800252                                      | 5 1                | Matrix -         | Containers & Preservatives     |             |  | Conditions of Receipt          |
| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Time Vir Vaneous   | Soil Unpres.     | HZSO4 HNO3 HCI NaOH ZnAC/ NaOH | 8031        |  |                                |
| Carbon 3 Efflert 5-16-13   | HO 1610 X          |                  | K                              | 3           |  |                                |
| Carbon 2 Elthert   | 1615               |                  |                                | 3           |  |                                |
| Carbon ! Effect  | 1670               |                  |                                | 3           |  |                                |
| In then  | 1625               |                  |                                | 3           |  |                                |
|  |                    |                  |                                |             |  |                                |
|  |                    |                  |                                |             |  |                                |
| 1  |                    |                  |                                |             | 480-38451 C                                  | hain of Custody                |
|  |                    |                  |                                |             |  | Ţ                              |
| ·  |                    |                  |                                |             |  |                                |
|  |                    |                  |                                |             |  |                                |
|  |                    |                  |                                |             |  |                                |
|  |                    |                  |                                |             |  |                                |
| Possible Hazard Identification   | Sample             | e Disposal       |                                |             | (A fee may be ass                            | essed if samples are retained  |
|  | Unknown            | eturn To Client  |                                | Archive For | Months   longer than 1 mon                   |                                |
| Turn Around Time Required  24 Hours  |                    | -day_            | QC Requirements (Speci         | ify)        |  |                                |
| 1. Heinbulshed By  | 5-16-13            | 77700            | 1. NetelvedBy                  | The         |  | 5/16/13 Time 700               |
| 2. Relinquished By   | Date               | Time             | 2. Received By                 | •           |  | Date Time                      |
| 3. Relinquished By   | Date               | Time             | 3. Received By                 |             |  | Date Time                      |
| Comments   |                    | 1                |                                | کے          | 8#1  |                                |
| DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with                | h the Sample; PINK | ( - Field Copy   |                                |             |  |                                |







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## **Login Sample Receipt Checklist**

Client: New York State D.E.C. Job Number: 480-38451-1

Login Number: 38451 List Source: TestAmerica Buffalo

List Number: 1 Creator: Kolb, Chris M

| Question   | Answer | Comment |
|--|--------|---------|
| Radioactivity either was not measured or, if measured, is at or below background | True   |         |
| The cooler's custody seal, if present, is intact.                                | True   |         |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |         |
| Samples were received on ice.  | True   |         |
| Cooler Temperature is acceptable.  | True   |         |
| Cooler Temperature is recorded.  | True   |         |
| COC is present.  | True   |         |
| COC is filled out in ink and legible.  | True   |         |
| COC is filled out with all pertinent information.                                | True   |         |
| Is the Field Sampler's name present on COC?                                      | True   |         |
| There are no discrepancies between the sample IDs on the containers and the COC. | True   |         |
| Samples are received within Holding Time.  | True   |         |
| Sample containers have legible labels.   | True   |         |
| Containers are not broken or leaking.  | True   |         |
| Sample collection date/times are provided.                                       | True   |         |
| Appropriate sample containers are used.  | True   |         |
| Sample bottles are completely filled.  | True   |         |
| Sample Preservation Verified   | True   |         |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |         |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | True   |         |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True   |         |
| Multiphasic samples are not present.   | True   |         |
| Samples do not require splitting or compositing.                                 | True   |         |
| Sampling Company provided.   | True   |         |
| Samples received within 48 hours of sampling.                                    | True   |         |
| Samples requiring field filtration have been filtered in the field.              | True   |         |
| Chlorine Residual checked.   | N/A    |         |

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THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo 10 Hazelwood Drive Amherst, NY 14228-2298 Tel: (716)691-2600

TestAmerica Job ID: 480-39619-1

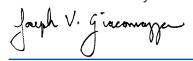
Client Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Sampling Event: Mthly Post-Carbon Mthly Pre-Carbon

#### For:

New York State D.E.C. 270 Michigan Avenue Buffalo, New York 14203

Attn: Mr. Glenn May



Authorized for release by: 6/18/2013 8:54:39 AM

Joe Giacomazza, Project Administrator joe.giacomazza@testamericainc.com

Designee for

Brian Fischer, Project Manager II brian.fischer@testamericainc.com

.....LINKS .....

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**Have a Question?** 



**Visit us at:**www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Joe Giacomazza **Project Administrator** 6/18/2013 8:54:39 AM

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

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## **Definitions/Glossary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Practical Quantitation Limit

Toxicity Equivalent Factor (Dioxin)

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

**Quality Control** 

Relative error ratio

TestAmerica Job ID: 480-39619-1

#### **Qualifiers**

#### **General Chemistry**

| Qualifier | Qualifier Description                             |
|-----------|---|
| HF        | Field parameter with a holding time of 15 minutes |

#### **Glossary**

PQL

QC

RER

RPD

TEF

TEQ

RL

| Abbreviation   | These commonly used abbreviations may or may not be present in this report.                                 |
|----------------|---|
| ¤              | Listed under the "D" column to designate that the result is reported on a dry weight basis                  |
| %R             | Percent Recovery  |
| CNF            | Contains no Free Liquid   |
| DER            | Duplicate error ratio (normalized absolute difference)  |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC            | Decision level concentration  |
| MDA            | Minimum detectable activity   |
| EDL            | Estimated Detection Limit   |
| MDC            | Minimum detectable concentration  |
| MDL            | Method Detection Limit  |
| ML             | Minimum Level (Dioxin)  |
| NC             | Not Calculated  |
| ND             | Not detected at the reporting limit (or MDL or EDL if shown)  |

TestAmerica Buffalo

#### **Case Narrative**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-39619-1

Job ID: 480-39619-1

**Laboratory: TestAmerica Buffalo** 

Narrative

Job Narrative 480-39619-1

#### Receipt

The samples were received on 6/6/2013 2:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 5.3° C and 5.5° C.

#### GC/MS VOA

No analytical or quality issues were noted.

#### Ion Chromatography

No analytical or quality issues were noted.

#### GC VOA

No analytical or quality issues were noted.

#### Metals

No analytical or quality issues were noted.

#### **General Chemistry**

Method(s) SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample(s) has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Post-Carbon (480-39619-1)

No other analytical or quality issues were noted.

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TestAmerica Buffalo 6/18/2013

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

**Client Sample ID: Post-Carbon** 

Date Collected: 06/06/13 14:15 Date Received: 06/06/13 14:40 Lab Sample ID: 480-39619-1

. Matrix: Wastewater

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| 1,1,1-Trichloroethane       | ND     |           | 1.0 | 0.82 | ug/L |   |          | 06/09/13 00:13 | 1       |
| 1,1,2,2-Tetrachloroethane   | ND     |           | 1.0 | 0.21 | ug/L |   |          | 06/09/13 00:13 | 1       |
| 1,1,2-Trichloroethane       | ND     |           | 1.0 | 0.23 | ug/L |   |          | 06/09/13 00:13 | 1       |
| 1,1-Dichloroethane          | ND     |           | 1.0 | 0.38 | ug/L |   |          | 06/09/13 00:13 | 1       |
| 1,1-Dichloroethene          | ND     |           | 1.0 | 0.29 | ug/L |   |          | 06/09/13 00:13 | 1       |
| 1,2-Dichloroethane          | ND     |           | 1.0 | 0.21 | ug/L |   |          | 06/09/13 00:13 | 1       |
| 1,2-Dichloroethene, Total   | ND     |           | 2.0 | 0.70 | ug/L |   |          | 06/09/13 00:13 | 1       |
| 1,2-Dichloropropane         | ND     |           | 1.0 | 0.72 | ug/L |   |          | 06/09/13 00:13 | 1       |
| 2-Hexanone                  | ND     |           | 5.0 | 1.2  | ug/L |   |          | 06/09/13 00:13 | 1       |
| 2-Butanone (MEK)            | ND     |           | 10  | 1.3  | ug/L |   |          | 06/09/13 00:13 | 1       |
| 4-Methyl-2-pentanone (MIBK) | ND     |           | 5.0 | 2.1  | ug/L |   |          | 06/09/13 00:13 | 1       |
| Acetone                     | ND     |           | 10  | 3.0  | ug/L |   |          | 06/09/13 00:13 | 1       |
| Benzene                     | ND     |           | 1.0 | 0.41 | ug/L |   |          | 06/09/13 00:13 | 1       |
| Bromodichloromethane        | ND     |           | 1.0 | 0.39 | ug/L |   |          | 06/09/13 00:13 | 1       |
| Bromoform                   | ND     |           | 1.0 | 0.26 | ug/L |   |          | 06/09/13 00:13 | 1       |
| Bromomethane                | ND     |           | 1.0 | 0.69 | ug/L |   |          | 06/09/13 00:13 | 1       |
| Carbon disulfide            | ND     |           | 1.0 | 0.19 | ug/L |   |          | 06/09/13 00:13 | 1       |
| Carbon tetrachloride        | ND     |           | 1.0 | 0.27 | ug/L |   |          | 06/09/13 00:13 | 1       |
| Chlorobenzene               | ND     |           | 1.0 | 0.75 | ug/L |   |          | 06/09/13 00:13 | 1       |
| Dibromochloromethane        | ND     |           | 1.0 | 0.32 | ug/L |   |          | 06/09/13 00:13 | 1       |
| Chloroethane                | ND     |           | 1.0 | 0.32 | ug/L |   |          | 06/09/13 00:13 | 1       |
| Chloroform                  | ND     |           | 1.0 | 0.34 | ug/L |   |          | 06/09/13 00:13 | 1       |
| Chloromethane               | ND     |           | 1.0 | 0.35 | ug/L |   |          | 06/09/13 00:13 | 1       |
| cis-1,3-Dichloropropene     | ND     |           | 1.0 | 0.36 | ug/L |   |          | 06/09/13 00:13 | 1       |
| Ethylbenzene                | ND     |           | 1.0 | 0.74 | ug/L |   |          | 06/09/13 00:13 | 1       |
| Methylene Chloride          | ND     |           | 1.0 | 0.44 | ug/L |   |          | 06/09/13 00:13 | 1       |
| Styrene                     | ND     |           | 1.0 | 0.73 | ug/L |   |          | 06/09/13 00:13 | 1       |
| Tetrachloroethene           | ND     |           | 1.0 | 0.36 | ug/L |   |          | 06/09/13 00:13 | 1       |
| Toluene                     | ND     |           | 1.0 | 0.51 | ug/L |   |          | 06/09/13 00:13 | 1       |
| trans-1,3-Dichloropropene   | ND     |           | 1.0 | 0.37 | ug/L |   |          | 06/09/13 00:13 | 1       |
| Trichloroethene             | ND     |           | 1.0 | 0.46 | ug/L |   |          | 06/09/13 00:13 | 1       |
| Vinyl chloride              | ND     |           | 1.0 | 0.90 | ug/L |   |          | 06/09/13 00:13 | 1       |
| Vinyl acetate               | ND     |           | 5.0 |      | ug/L |   |          | 06/09/13 00:13 | 1       |
| Xylenes, Total              | ND     |           | 2.0 |      | ug/L |   |          | 06/09/13 00:13 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prep | pared | Analyzed       | Dil Fac |  |
|------------------------------|-----------|-----------|----------|------|-------|----------------|---------|--|
| 1,2-Dichloroethane-d4 (Surr) | 107       |           | 66 - 137 |      |       | 06/09/13 00:13 | 1       |  |
| Toluene-d8 (Surr)            | 99        |           | 71 - 126 |      |       | 06/09/13 00:13 | 1       |  |
| 4-Bromofluorobenzene (Surr)  | 97        |           | 73 - 120 |      |       | 06/09/13 00:13 | 1       |  |

Method: 8021B - Volatile Organic Compounds (GC)

| Analyte                 | Result Qualifier | RL   | MDL   | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------|------------------|------|-------|------|---|----------|----------------|---------|
| 1,2,4-Trimethylbenzene  | ND ND            | 0.20 | 0.035 | ug/L |   |          | 06/14/13 12:50 | 1       |
| 1,3,5-Trimethylbenzene  | ND               | 0.20 | 0.15  | ug/L |   |          | 06/14/13 12:50 | 1       |
| Benzene                 | ND               | 0.20 | 0.023 | ug/L |   |          | 06/14/13 12:50 | 1       |
| Ethylbenzene            | ND               | 0.20 | 0.029 | ug/L |   |          | 06/14/13 12:50 | 1       |
| Isopropylbenzene        | ND               | 0.20 | 0.027 | ug/L |   |          | 06/14/13 12:50 | 1       |
| Methyl tert-butyl ether | ND               | 0.40 | 0.044 | ug/L |   |          | 06/14/13 12:50 | 1       |
| m,p-Xylene              | ND               | 0.40 | 0.054 | ug/L |   |          | 06/14/13 12:50 | 1       |
| n-Butylbenzene          | ND               | 0.20 | 0.031 | ug/L |   |          | 06/14/13 12:50 | 1       |
|                         |                  |      |       |      |   |          |                |         |

TestAmerica Buffalo

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Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-39619-1

**Client Sample ID: Post-Carbon** 

Date Collected: 06/06/13 14:15 Date Received: 06/06/13 14:40

Lab Sample ID: 480-39619-1

**Matrix: Wastewater** 

| Analyte                                | Result    | Qualifier | RL       | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
|--|-----------|-----------|----------|--------|------|---|----------------|----------------|---------|
| n-Propylbenzene                        | ND        |           | 0.20     | 0.13   | ug/L |   |                | 06/14/13 12:50 | 1       |
| o-Xylene                               | ND        |           | 0.20     | 0.027  | ug/L |   |                | 06/14/13 12:50 | 1       |
| p-Cymene                               | ND        |           | 0.20     | 0.030  | ug/L |   |                | 06/14/13 12:50 | 1       |
| sec-Butylbenzene                       | ND        |           | 0.20     | 0.020  | ug/L |   |                | 06/14/13 12:50 | 1       |
| Toluene                                | ND        |           | 0.20     | 0.036  | ug/L |   |                | 06/14/13 12:50 | 1       |
| Xylenes, Total                         | ND        |           | 0.60     | 0.054  | ug/L |   |                | 06/14/13 12:50 | 1       |
| Surrogate                              | %Recovery | Qualifier | Limits   |        |      |   | Prepared       | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene                 | 107       |           | 63 - 145 |        |      |   |                | 06/14/13 12:50 | 1       |
| 4-Bromofluorobenzene                   | 110       |           | 64 - 141 |        |      |   |                | 06/14/13 12:50 | 1       |
| -<br>Method: 200.7 Rev 4.4 - Metals (I | CP)       |           |          |        |      |   |                |                |         |
| Analyte                                | Result    | Qualifier | RL       | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Iron                                   | 78.2      |           | 50.0     | 19.3   | ug/L |   | 06/07/13 07:20 | 06/07/13 18:58 | 1       |
| General Chemistry                      |           |           |          |        |      |   |                |                |         |
| Analyte                                | Result    | Qualifier | RL       | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Cyanide, Total                         | 0.14      |           | 0.010    | 0.0050 | mg/L |   | 06/10/13 01:30 | 06/10/13 20:34 | 1       |
| Analyte                                | Result    | Qualifier | RL       | RL     | Unit | D | Prepared       | Analyzed       | Dil Fac |
| pH                                     | 7.90      | HF        | 0.100    | 0.100  | SU   |   |                | 06/06/13 18:13 | 1       |

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-39619-1

Lab Sample ID: 480-39621-1

**Matrix: Wastewater** 

**Client Sample ID: Pre-Carbon** Date Collected: 06/06/13 14:25

Date Received: 06/06/13 14:40

| Method: 200.7 Rev 4.4 - Metals (IC | P)               |      |      |      |   |                |                |         |
|------------------------------------|------------------|------|------|------|---|----------------|----------------|---------|
| Analyte                            | Result Qualifier | RL   | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Calcium                            | 94400            | 500  | 100  | ug/L |   | 06/07/13 07:20 | 06/07/13 18:55 | 1       |
| Iron                               | 177              | 50.0 | 19.3 | ug/L |   | 06/07/13 07:20 | 06/07/13 18:55 | 1       |
| Magnesium                          | 47000            | 200  | 43.4 | ug/L |   | 06/07/13 07:20 | 06/07/13 18:55 | 1       |
| Potassium                          | 3610             | 500  | 100  | ug/L |   | 06/07/13 07:20 | 06/07/13 18:55 | 1       |
| Sodium                             | 42700            | 1000 | 324  | ug/L |   | 06/07/13 07:20 | 06/07/13 18:55 | 1       |
| General Chemistry                  |                  |      |      |      |   |                |                |         |
| Analyte                            | Result Qualifier | RL   | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Chloride                           | 62.7             | 0.50 | 0.28 | mg/L |   |                | 06/09/13 12:17 | 1       |
| Sulfate                            | 93.0             | 2.0  | 0.35 | mg/L |   |                | 06/09/13 12:17 | 1       |
| Alkalinity, Total                  | 308              | 100  | 40.0 | mg/L |   |                | 06/11/13 11:11 | 10      |

#### **Lab Chronicle**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-39619-1

Lab Sample ID: 480-39619-1

Lab Sample ID: 480-39621-1

**Matrix: Wastewater** 

Matrix: Wastewater

Client Sample ID: Post-Carbon

Date Collected: 06/06/13 14:15 Date Received: 06/06/13 14:40

|           | Batch    | Batch         |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|---------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method        | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8260B         |     | 1        | 122977 | 06/09/13 00:13 | TRF     | TAL BUF |
| Total/NA  | Analysis | 8021B         |     | 1        | 123919 | 06/14/13 12:50 | DB      | TAL BUF |
| Total/NA  | Prep     | 200.7         |     |          | 122594 | 06/07/13 07:20 | SS      | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |     | 1        | 122922 | 06/07/13 18:58 | LH      | TAL BUF |
| Total/NA  | Analysis | SM 4500 H+ B  |     | 1        | 122613 | 06/06/13 18:13 | KS      | TAL BUF |
| Total/NA  | Prep     | Distill/CN    |     |          | 123031 | 06/10/13 01:30 | LAW     | TAL BUF |
| Total/NA  | Analysis | 335.4         |     | 1        | 123186 | 06/10/13 20:34 | JE      | TAL BUF |

Client Sample ID: Pre-Carbon

Date Collected: 06/06/13 14:25

Date Received: 06/06/13 14:40

| _         | Batch    | Batch         |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|---------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method        | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Prep     | 200.7         |     |          | 122594 | 06/07/13 07:20 | SS      | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |     | 1        | 122922 | 06/07/13 18:55 | LH      | TAL BUF |
| Total/NA  | Analysis | 300.0         |     | 1        | 122820 | 06/09/13 12:17 | KAC     | TAL BUF |
| Total/NA  | Analysis | 310.2         |     | 10       | 123395 | 06/11/13 11:11 | JE      | TAL BUF |

#### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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## **Certification Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-39619-1

### **Laboratory: TestAmerica Buffalo**

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority         | Program       | EPA Region | Certification ID | Expiration Date |
|-------------------|---------------|------------|------------------|-----------------|
| Arkansas DEQ      | State Program | 6          | 88-0686          | 07-06-13        |
| California        | NELAP         | 9          | 1169CA           | 09-30-13        |
| Connecticut       | State Program | 1          | PH-0568          | 09-30-14        |
| Florida           | NELAP         | 4          | E87672           | 06-30-13        |
| Georgia           | State Program | 4          | N/A              | 03-31-14        |
| Georgia           | State Program | 4          | 956              | 06-30-13        |
| Georgia           | State Program | 4          | 956              | 03-31-14        |
| Ilinois           | NELAP         | 5          | 200003           | 09-30-13        |
| owa               | State Program | 7          | 374              | 03-15-15        |
| Kansas            | NELAP         | 7          | E-10187          | 01-31-14        |
| Kentucky          | State Program | 4          | 90029            | 12-31-13        |
| Kentucky (UST)    | State Program | 4          | 30               | 04-01-14        |
| Louisiana         | NELAP         | 6          | 02031            | 06-30-13        |
| Maine             | State Program | 1          | NY00044          | 12-04-13        |
| Maryland          | State Program | 3          | 294              | 03-31-14        |
| Massachusetts     | State Program | 1          | M-NY044          | 06-30-13        |
| Michigan          | State Program | 5          | 9937             | 04-01-14        |
| Minnesota         | NELAP         | 5          | 036-999-337      | 12-31-13        |
| New Hampshire     | NELAP         | 1          | 2973             | 09-11-13        |
| New Hampshire     | NELAP         | 1          | 2337             | 11-17-13        |
| New Jersey        | NELAP         | 2          | NY455            | 06-30-13        |
| New York          | NELAP         | 2          | 10026            | 04-01-14        |
| North Dakota      | State Program | 8          | R-176            | 03-31-14        |
| Oklahoma          | State Program | 6          | 9421             | 08-31-13        |
| Oregon            | NELAP         | 10         | NY200003         | 06-09-14        |
| Pennsylvania      | NELAP         | 3          | 68-00281         | 07-31-13        |
| Rhode Island      | State Program | 1          | LAO00328         | 12-31-13        |
| Tennessee         | State Program | 4          | TN02970          | 04-01-14        |
| Texas             | NELAP         | 6          | T104704412-11-2  | 07-31-13        |
| JSDA              | Federal       |            | P330-11-00386    | 11-22-14        |
| /irginia          | NELAP         | 3          | 460185           | 09-14-13        |
| Washington        | State Program | 10         | C784             | 02-10-14        |
| West Virginia DEP | State Program | 3          | 252              | 09-30-13        |
| Wisconsin         | State Program | 5          | 998310390        | 08-31-13        |

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## **Method Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-39619-1

| Method        | Method Description                 | Protocol | Laboratory |
|---------------|------------------------------------|----------|------------|
| 8260B         | Volatile Organic Compounds (GC/MS) | SW846    | TAL BUF    |
| 8021B         | Volatile Organic Compounds (GC)    | SW846    | TAL BUF    |
| 200.7 Rev 4.4 | Metals (ICP)                       | EPA      | TAL BUF    |
| 300.0         | Anions, Ion Chromatography         | MCAWW    | TAL BUF    |
| 310.2         | Alkalinity                         | MCAWW    | TAL BUF    |
| 335.4         | Cyanide, Total                     | MCAWW    | TAL BUF    |
| SM 4500 H+ B  | pН                                 | SM       | TAL BUF    |

#### Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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## **Sample Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-39619-1

| Lab Sample ID | Client Sample ID | Matrix     | Collected      | Received       |
|---------------|------------------|------------|----------------|----------------|
| 480-39619-1   | Post-Carbon      | Wastewater | 06/06/13 14:15 | 06/06/13 14:40 |
| 480-39621-1   | Pre-Carbon       | Wastewater | 06/06/13 14:25 | 06/06/13 14:40 |

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## TestAmerica Buffalo

10 Hazelwood Drive

# **Chain of Custody Record**

THE LEADER IN ENVIRONMENTAL TESTING

| 10 Hazelwood Drive   |                    |            |              |                         |                                |              |                        |                                       |                |           |             |              | 1             |            |                  | O Mari  |
|--|--------------------|------------|--------------|-------------------------|--------------------------------|--------------|------------------------|---------------------------------------|----------------|-----------|-------------|--------------|---------------|------------|------------------|---|
| Amherst, NY 14228-2298   |                    | 2          |              |                         |                                |              | 100                    |                                       |                |           | Carrier Tra | acking No    | o(s):         |            | CO               | C No:<br>0-30385-1177.1                       |
| Phone (716) 691-2600 Fax (716) 691-7991                                  | Sampler:           | 1          |              | Lab PM                  | :<br>- Prior                   | n            |                        |                                       |                |           |             |              |               |            | Pag              |   |
|  | M. VC              | elilo      |              | Fische                  | er, Briai                      | -            |                        |                                       |                |           |             |              |               |            | Pag              | age 1 of 1                                    |
| Client Information   | Phone: 44          | 5 230      | $\Omega$     | E-Mail:                 | fischer(                       | @tests       | meric                  | ainc c                                | m              |           |             |              |               |            |                  | b#:   |
| Client Contact:  | Phone: 484 64      | D 870      | 16           | brian.f                 | ischer(                        | Wiesia       | iciic                  |                                       |                |           | -           |              |               |            | Jot              | D #.  |
| Thomas Palmer  |                    |            |              |                         |                                |              |                        | Α                                     | nalys          | is Re     | questec     | 1            |               |            | 10               | reservation Codes:                            |
| Company:   |                    |            |              | _                       |                                |              | _                      | <del></del>                           | ΓÍ             | $\neg$    |             |              |               |            |                  |   |
| Groundwater & Environmental Services Inc                                 | Due Date Requested | :          |              |                         | 1 3                            |              | - 1                    |                                       | 1 1            |           | 1 1         | 1 1          |               |            | A                | - HCL M - Hexane<br>NaOH N - None             |
| Address:   |                    |            |              | $\overline{}$           | 300                            |              | - 1                    | 1                                     | 1 1            |           |             |              |               |            |                  | - NaOH N - None<br>- Zn Acetate O - AsNaO2    |
| 495 Aero Drive Suite 3   | TAT Requested (day | s):        |              |                         | 100                            |              |                        | 1                                     | 1 1            | 96        |             | 1 1          | - 1           |            |                  | Nitric Acid P - Na2O4S                        |
| City:  |                    | 10         |              |                         |                                |              | - 1                    |                                       | 1 1            |           | 1 1         | 1 1          | - 1           |            | E                | - NaHSO4 Q - Na2SOO                           |
| Cheektowaga  | 57                 | V          |              |                         |                                | ١ ١          |                        |                                       | 1 1            | - 1       | 1 1         | 1 1          | - 1           |            | F                | - MeOn  |
| State, Zip:  | <i>)</i> 1         |            |              |                         | 36                             |              |                        |                                       |                |           | 1 1         | 1 1          | - 1           |            | 19               | A scorbic Acid T - TSP Dodecahydrate          |
| NY, 14225  | PO #:              |            |              |                         | aé                             |              | - 13                   | 52                                    |                |           | 1 1         | 1 1          |               | 1 1        |                  | U - Acetone                                   |
| Phone:   | Purchase Order r   | not requir |              |                         | 2                              |              | - 1                    | ·                                     |                |           | 1 1         |              |               | 1 1        | w .              | J - DI Water V - MCAA J - DI Water W - ph 4-5 |
| 5 m - 3  | WO #:              |            |              |                         | or No)                         |              | 2                      | ð                                     |                |           |             |              |               |            | Je.              | K - EDIA                                      |
| Email:   |                    |            |              |                         |                                |              | OLM04.2                | []                                    |                | 1 1       |             | 1            |               |            | containers       | L - EDA Z - other (specify)                   |
| tpalmer@gesonline.com  | Project #:         |            |              |                         |                                |              | 9                      | Lis                                   |                |           |             |              |               |            | 5                | Other:  |
| Project Name:<br>NYSDEC - Gastown WWTP/Gastown Event Desc: Mthly Post-Ca | 48002525           |            |              |                         | वे हैं                         |              | list                   | S E                                   |                |           |             |              |               |            | 5                |   |
|  | SSOW#:             |            |              |                         | Sample (Yes or ISD (Yes or No) |              | 뒫                      | ¥   5                                 |                | 1 1       |             |              |               |            |                  |   |
| Site: New York   |                    |            |              |                         |                                |              | -                      | 6 5                                   | <u> </u>       |           |             |              |               |            | E                | 1   |
| New Tork   |                    |            | Sample       | Matrix                  | Filtere                        | ۾            | ջ                      | §                                     | .   ±          | 1 1       | 1 1         |              | 1 1           |            | 쿨                |   |
|  |                    |            | Type         | W=water,                | EE                             | 200.7 - Iron | 8260B - (MOD) TCL list | 8021B - (MOD) STARS List - VOA - 8021 | SM4500_H+ - pH |           |             |              | 1 1           |            | Total Number     | Sees in Instructions/Note:                    |
|  |                    | Sample     | (C=comp, o   | S=solid,<br>=waste/oil, | 등 원                            | 0.7          | 98                     | 120                                   | M4.            |           |             | - 1          |               |            | ۴                | Special Instructions/Note:                    |
| 1  | Sample Date        | Time       | G=grab) BT=  | Tissue, A=Air           | ) 🗓 🐧                          | 2 2          |                        | D. 1900                               | -              | 200       |             |              | 3000          |            | X                |   |
| Sample Identification  | Sample Date        |            | Preservation | Code:                   | M>                             | (D           | Α                      | A B                                   | N              |           |             |              | +             |            |                  |   |
|  | 1                  |            |              |                         | NN                             | ,            |                        |                                       | -              |           |             |              |               |            |                  |   |
|  | 6/6/13             | 1415       | 6            | Water                   | W 1/4                          | -            | $\vdash$               | $\vdash$                              | +              | +-+       | $\dashv$    |              |               |            |                  |   |
| Post-Carbon  | 1 4 1 1 1 1        | 1,,,,      |              |                         | $\mathbf{I}$                   |              |                        |                                       | 1              |           |             |              | +             | +          | 2.7              |   |
|  |                    |            |              |                         | ++                             | +            | -                      | $\vdash$                              | $\neg$         |           |             |              | 1 1           | - 1        |                  |   |
|  |                    |            |              |                         | 11                             | -            | 1                      |                                       |                |           |             | 1 1 1 1 1 1  |               | 1111 11111 | 1 <b>1111</b> 11 |   |
|  |                    |            |              |                         | +                              | $\top$       |                        |                                       |                | 1 1       | - 1         | 1/11/        |               |            | NIII (           | WILLIAM WILLIAM                               |
|  |                    | 1          | 1 1          |                         | 11                             |              |                        | $\vdash$                              | $\perp$        | +         | -+          | 11111        |               |            | MMI              |   |
|  |                    | -          | +            |                         | $\top$                         |              |                        | 1 1                                   | - 1            |           | - 1         | \W           |               |            | \\ <b>\\\\</b>   | ((()  |
|  |                    | 1          |              |                         | $\dashv$                       |              | +                      | +                                     | +              | _         | -           | \\ <b>\\</b> |               |            |                  | s Custody                                     |
|  | +                  |            |              |                         | - 1 1                          |              |                        | 1 1                                   | - 1            | -         |             | 49           | 0-396         | 19 Ct      | nain             | of Custody                                    |
|  |                    |            |              |                         | +                              | +            | +-                     | +                                     | $\neg$         |           |             | 40           | 0-000         |            |                  |   |
|  |                    |            | 1            |                         |                                |              | 1                      |                                       |                |           | $\vdash$    | ٠.           |               |            |                  |   |
|  |                    |            | +            |                         | +                              |              | $\top$                 |                                       |                | 1         |             |              |               |            |                  |   |
|  |                    |            |              |                         | 11                             |              | 1                      | $\perp$                               | $\rightarrow$  | -         |             | ++           |               |            |                  |   |
|  | +                  | +          | +            |                         | $\neg \neg$                    |              |                        |                                       |                | - 1       |             |              |               | $\sqcup$   |                  |   |
|  |                    |            |              |                         | $\dashv$                       | -            | 4                      | +                                     | $\vdash$       | -         |             | T            |               |            |                  |   |
|  |                    |            |              |                         |                                |              |                        |                                       |                |           |             | $\perp$      | $\rightarrow$ | $\vdash$   | -                | 30  |
|  |                    |            |              |                         | -H                             | -            | +                      | +                                     | $\vdash$       |           | T           |              | 1             | 1 1        |                  |   |
|  |                    |            |              |                         |                                |              |                        |                                       |                |           |             | 1            |               | s are r    | etain            | nive For Months                               |
|  |                    |            |              |                         |                                | Sam          | ole Di                 | sposa                                 | I (Af          | ee may    | be asses    | ssed if      | sampie        | Sale       |                  | Nonths Months                                 |
|  |                    | _          | _            |                         |                                |              | ]                      | ım To                                 | Client         |           | Dispo       | sal By       | Lab           |            | Arch             | nive For Months                               |
| Possible Hazard Identification   | son B Unkn         | own -      | kadiological |                         |                                | 1            | Kell                   | tructio                               | ns/Or          |           | ements:     |              |               |            |                  |   |
| Non-Hazard Flammable Skill III   | JOIN D 0.11011     |            |              |                         |                                | Spec         | iai ins                | structio                              | i ior QC       | , recquii | _,,         |              |               |            |                  |   |
| Deliverable Requested: I, II, III, IV, Other (specify)                   |                    |            |              |                         | 1                              |              |                        |                                       | ^              |           |             |              | od of Ship    | ment:      |                  | , do-many                                     |
|  |                    | Date:      |              |                         | Ti                             | ime:         |                        |                                       | Λ.             |           | 11.         | 7            | Dat           | te/Time:   | 7                | 010/13 1446 TA                                |
| Empty Kit Relinquished by:   | Dete/Time          |            |              | Company,                |                                |              | Receive                | ed by:                                | 11/1           | 7, (      | Kol         | W            |               |            | U                |   |
| Relinquished by:   | Date/Time:         | 13 14      | 140          | 68                      | 5                              |              |                        |                                       | W              | $(/ \sim$ | ,           | - 0          | Da            | te/Time:   |                  | Company                                       |
| Tomopour and a second  | 6/6/               | 03         |              | Company                 |                                |              | Receiv                 | ed by:                                |                |           |             |              |               |            |                  | 0   |
| Relinquished by:   | Date/Time:         |            |              |                         |                                |              |                        |                                       |                |           |             |              | Da            | te/Time    | 1                | Company                                       |
| Nemiquisited by:   | Dete/Time:         |            |              | Company                 | <i></i>                        |              | Receiv                 | ed by:                                |                |           |             |              |               |            |                  |   |
| Relinquished by:   | Date/Time:         |            |              | 1                       |                                |              |                        |                                       |                |           |             | ndre:        | _             | ~ ~        |                  | C+1   |
| Relinquistied by.  |                    |            |              |                         |                                |              | Cooler                 | Tempe                                 | rature(s       | ) °C and  | Other Rema  | arks:        | $\leq$        | 3 -        | f C              | EH  |
| Custody Seals Intact: Custody Seal No.:                                  |                    |            |              |                         |                                |              |                        |                                       |                |           |             |              | ٠,١           | _          | -                |   |
|  |                    |            |              |                         |                                |              |                        |                                       |                |           |             | (0           | 00            |            |                  | 0 0 4 0                                       |
| A Voe A No   |                    |            |              |                         |                                |              |                        |                                       |                |           |             |              |               |            |                  |   |

## **Chain of Custody Record**

**TestAmerica** 

| Phone (716) 691-2600 Fax (716) 691-7991                                   | - 100             | 1 4            |            | II at D                          |                 |           |                      |             |          |               | <b>1</b> Ca | mier Tra  | acking I  | lo(s):   |                 |              | COC No:               |   |                        | A TATALON AND A STATE OF THE ST | $\neg$   |
|---|-------------------|----------------|------------|----------------------------------|-----------------|-----------|----------------------|-------------|----------|---------------|-------------|-----------|-----------|----------|-----------------|--------------|-----------------------|---|------------------------|--|----------|
|   | Sampler:          | Men            | /          | Lab P                            | 'м:<br>ner, Bri | ian       |                      |             |          |               | 100         | 11101 111 | aciding i | 10(3).   |                 |              | 480-303               | 6-1176  | 1                      |  | 1        |
| Client Information Client Contact   | Dhone:            | 1111 C         |            | E-Ma                             | il:             |           |                      |             |          |               | $\neg$      |           |           |          |                 |              | Page:                 | £ 1   |                        |  |          |
| Thomas Palmer   | 484               | 645 2          | 302        | brian                            | .fische         | er@tes    | tame                 | ricainc     | .com     |               | - 1         |           |           |          |                 | 1            | Page 1 c              | 1 1   |                        |  | $\dashv$ |
| Company:  |                   |                |            |                                  |                 |           |                      |             | Δna      | lysis l       | Requ        | ested     |           |          |                 |              | 300 #                 |   |                        |  | - 1      |
| Groundwater & Environmental Services Inc                                  | Due Date Requeste | d              |            |                                  |                 |           |                      | т.          | 1        | 1,5.5         | Toqu        | 1         | 1         | $\neg$   |                 |              | Preserva              | tion Co                                       | les:                   |  | $\neg$   |
| Address:<br>495 Aero Drive Suite 3  | Due Date Requeste | u.             |            |                                  |                 |           |                      |             |          |               |             |           | 1 1       |          |                 |              | A - HCL               |   | M - Hexa               | ne   | - 1      |
| City:   | TAT Requested (da | ys):           |            |                                  |                 |           |                      |             |          |               |             |           |           |          |                 |              | B - NaOH<br>C - Zn Ac |   | N - None<br>O - AsNa   |  | - 1      |
| Cheektowaga   |                   | -111           |            |                                  |                 |           |                      |             |          |               |             |           |           |          |                 |              | D - Nitric            | Acid  | P - Na2O               | 4S   |          |
| State, Zip:   |                   | 510            |            |                                  |                 |           |                      | - 1         |          |               |             |           |           |          |                 |              | E - NaHS<br>F - MeOH  |   | Q - Na2S<br>R - Na2S   |  |          |
| NY, 14225   | PO #:             |                |            |                                  |                 |           |                      |             |          |               |             |           |           |          |                 |              | G - Amch              | lor   | S - H2SC               | 4  | .        |
| Phone:  | Purchase Order    | not requir     |            |                                  | 9               |           |                      |             |          |               |             |           |           |          |                 |              | H - Ascor             | Dic Acid                                      | T - TSP E<br>U - Aceto | odecahydra<br>ne   | ate      |
| Email:  | WO #:             |                |            |                                  | 10 0            | , p       | 1                    | - 1         |          |               |             |           |           |          |                 | 60           | J - DI Wa             |   | V - MCA                | Ą  | - 1      |
| tpalmer@gesonline.com   | Project #:        |                |            |                                  | S S             |           | ا ہ ا                |             |          |               |             |           |           |          |                 | ine          | K - EDTA<br>L - EDA   |   | W - ph 4-<br>Z - other |  | - 1      |
| Project Name:<br>NYSDEC - Gastown WWTP/Gastown Event Desc: Mthly Pre-Carl |                   |                |            |                                  | 0 0             | i i       | l ĝ                  | _           |          |               |             |           |           |          |                 | container    | 011                   |   |                        |  |          |
| Site:   | SSOW#:            |                |            |                                  | Samp            | Local     | a A                  | Total       |          |               |             |           |           |          |                 | 0            |                       |   |                        |  | - 1      |
| New York  |                   |                |            |                                  | AS D            | - (MOD)   | اد                   |             | -1       |               |             |           |           |          |                 |              |                       |   |                        |  | $\neg$   |
|   |                   |                | Sample     | Matrix                           | MS W            |           | - (MOD) Local Method | Alkalinity, |          |               |             |           |           |          |                 | Total Number |                       |   |                        |  | - 1      |
|   |                   |                | Туре       | (W=water,<br>S=solid,            | Field Filt      | 300.0_28D | اخا                  | 4 - A       |          |               |             | -         |           |          |                 | 2            |                       |   |                        |  | - 1      |
|   | Sample Date       | Sample<br>Time | (C=comp,   | O=waste/oil,<br>BT=Tissue, A=Air | H H             | 300.0     | 200.7                | 310.2 -     |          |               |             |           |           |          |                 | 1            | s s                   | pecial lı                                     | struction              | ns/Note:   |          |
| Sample Identification   | Sample Date       |                |            | ation Code:                      | XX              |           |                      | N           |          |               |             |           |           | 1122     |                 |              |                       |   |                        |  |          |
|   | 10/6/13           | 1112 6         | 4          | Water                            | NIN             | -         |                      |             |          |               |             |           |           |          |                 |              |                       |   |                        |  | - 1      |
| Pre-Carbon  | 6/6/13            | 1425           | 6          | VValei                           | 101             | 4         |                      | $\vdash$    | +        | -             | ++          | +         | +         | $\vdash$ | +               |              |                       |   |                        |  | $\neg$   |
|   |                   |                |            |                                  |                 |           |                      |             |          |               |             |           | $\perp$   |          | $\perp$         |              |                       |   |                        |  | -        |
|   |                   |                |            |                                  | П               |           |                      |             |          |               |             | 1         |           |          |                 |              | 9                     |   |                        |  |          |
|   |                   |                |            |                                  | ++              | +         | +                    | +           | +        | +             | +           | $\dashv$  | 1111      |          | <b>111</b> 1111 | HIIII        |                       | III III III                                   |                        |  |          |
|   |                   |                |            |                                  | Ш               | $\perp$   | _                    | $\sqcup$    | $\perp$  | $\perp$       | $\vdash$    | _         |           |          |                 |              |                       | /// <b>////////</b>                           |                        | _  | $\dashv$ |
|   |                   |                |            |                                  | $\mathbf{I}$    |           |                      |             |          |               |             |           |           |          |                 |              |                       | // <b>///////////////////////////////////</b> | Ш                      |  |          |
|   |                   |                |            |                                  | ++              | +         |                      |             | $\top$   | $\top$        |             |           |           |          |                 |              |                       |   | <b>   </b>             |  |          |
|   |                   |                |            |                                  | ++              | +         |                      | $\vdash$    | +        | -             | +           | _         | 480       | -396     | 21 C            | hain         | of Cust               | ody   | 1111                   |  | $\neg$   |
|   |                   |                |            |                                  | 11              |           | 1                    |             |          |               |             | _         |           |          |                 |              |                       | Juy   |                        |  | -        |
|   |                   |                |            |                                  | T               |           |                      |             |          |               |             |           |           |          | 1               | 10           |                       |   |                        |  |          |
|   |                   |                | -          |                                  | ++              | +         | +                    | $\vdash$    | +        | _             | +           | -         | +         | +        | $\vdash$        |              |                       |   |                        |  |          |
|   |                   |                |            |                                  | $\perp$         |           |                      |             | $\perp$  |               | $\perp$     | $\perp$   | $\perp$   | _        | $\vdash$        |              |                       |   |                        |  |          |
|   |                   |                |            |                                  | 11              |           |                      |             |          |               |             |           |           |          |                 |              |                       |   |                        |  |          |
|   |                   | <del> </del>   | +          |                                  | ++              | +         | +                    | +           | $\dashv$ |               | $\top$      | $\top$    | $\top$    |          |                 |              |                       |   |                        |  |          |
|   |                   |                |            |                                  | Ц,              |           | ١                    | 1           | (4.5     |               | 5           |           | l if ca   | moles    | 200 0           | etain        | ed longer             | than 1  | month)                 |  | -        |
| Possible Hazard Identification  |                   |                |            |                                  | ١               |           |                      |             |          | ee may        |             |           |           |          |                 |              | nive For              | aran  | Months                 | :  |          |
| Non-Hazard Flammable Skin Irritant Poison                                 | n B Unknov        | vn Ra          | diological |                                  |                 |           |                      | n To C      |          | Requir        |             | posal     | ву Lai    |          |                 | AICH         | live For              |   | _ Worth                |  |          |
| Deliverable Requested: I, II, III, IV, Other (specify)                    |                   |                |            |                                  | ١               | specia    | ınsu                 | uction      | S/QC     | Requir        | ements      |           |           |          |                 |              |                       |   |                        |  |          |
| Empty Kit Relinquished by:  |                   | Date:          |            |                                  | Tim             | e:        |                      | Λ.          |          |               | n           | М         | ethod o   | f Shipn  | nent:           | . ,          |                       |   |                        |  |          |
| Relinquished by   | Date/Time:        | /1- /          | 11110      | Company                          | 0               | Re        | ceived               | by:         | 10       |               | 1/21        | 1         | _         | Date     | /Time/          | nΠ           | 0/13                  | 3 14  | 4 Compa                | ny A   |          |
|   | 6/6/              | 115 1          | 440        | Company                          | >               | Re        | ceived               | by:         | V) C     | $\mathcal{M}$ | 100         |           |           | Date     | /Time:          | 4            | <del>V( '</del>       |   | Compa                  | iny ( )  |          |
| Relinquished by:  | Date/Time:/       |                |            | Jonipuni                         |                 |           |                      |             |          |               |             |           |           | -        |                 |              |                       |   | Compa                  | inv  |          |
| Relinquished by:  | Date/Time:        |                |            | Company                          |                 |           | ceived               |             |          |               |             |           |           | Date     | e/Time:         |              |                       |   |                        | ,  |          |
| Custody Seals Intact: Custody Seal No.:                                   |                   |                |            | 1                                |                 | Со        | oler Te              | mperatu     | ure(s)   | °C and C      | ther Rer    | narks:    |           |          |                 | 5            | ,5 7                  | CE  | #                      | (  |          |
| Δ Yes Δ No  |                   |                |            |                                  |                 |           |                      |             |          |               | _           | _         |           |          |                 | _            |                       |   |                        |  |          |















## **Login Sample Receipt Checklist**

Client: New York State D.E.C. Job Number: 480-39619-1

Login Number: 39619 List Source: TestAmerica Buffalo

List Number: 1 Creator: Kolb, Chris M

| Question   | Answer | Comment |
|--|--------|---------|
| Radioactivity either was not measured or, if measured, is at or below background | True   |         |
| The cooler's custody seal, if present, is intact.                                | True   |         |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |         |
| Samples were received on ice.  | True   |         |
| Cooler Temperature is acceptable.  | True   |         |
| Cooler Temperature is recorded.  | True   |         |
| COC is present.  | True   |         |
| COC is filled out in ink and legible.  | True   |         |
| COC is filled out with all pertinent information.                                | True   |         |
| Is the Field Sampler's name present on COC?                                      | True   |         |
| There are no discrepancies between the sample IDs on the containers and the COC. | True   |         |
| Samples are received within Holding Time.  | True   |         |
| Sample containers have legible labels.   | True   |         |
| Containers are not broken or leaking.  | True   |         |
| Sample collection date/times are provided.                                       | True   |         |
| Appropriate sample containers are used.  | True   |         |
| Sample bottles are completely filled.  | True   |         |
| Sample Preservation Verified   | True   |         |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |         |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | True   |         |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True   |         |
| Multiphasic samples are not present.   | True   |         |
| Samples do not require splitting or compositing.                                 | True   |         |
| Sampling Company provided.   | True   |         |
| Samples received within 48 hours of sampling.                                    | True   |         |
| Samples requiring field filtration have been filtered in the field.              | True   |         |
| Chlorine Residual checked.   | N/A    |         |

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10

#### **Login Sample Receipt Checklist**

Client: New York State D.E.C. Job Number: 480-39619-1

List Source: TestAmerica Buffalo

Login Number: 39621 List Number: 1 Creator: Kolb, Chris M

Containers are not broken or leaking.

Sample bottles are completely filled.

Multiphasic samples are not present.

Sampling Company provided.

Chlorine Residual checked.

Samples do not require splitting or compositing.

Samples received within 48 hours of sampling.

Samples requiring field filtration have been filtered in the field.

Sample Preservation Verified

MS/MSDs

diameter.

needs

Sample collection date/times are provided.

There is sufficient vol. for all requested analyses, incl. any requested

VOA sample vials do not have headspace or bubble is <6mm (1/4") in

If necessary, staff have been informed of any short hold time or quick TAT

Appropriate sample containers are used.

| ordator. Rolls, office in  |        |         |
|--|--------|---------|
| Question   | Answer | Comment |
| Radioactivity either was not measured or, if measured, is at or below background | True   |         |
| The cooler's custody seal, if present, is intact.                                | True   |         |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |         |
| Samples were received on ice.  | True   |         |
| Cooler Temperature is acceptable.  | True   |         |
| Cooler Temperature is recorded.  | True   |         |
| COC is present.  | True   |         |
| COC is filled out in ink and legible.  | True   |         |
| COC is filled out with all pertinent information.                                | True   |         |
| Is the Field Sampler's name present on COC?                                      | True   |         |
| There are no discrepancies between the sample IDs on the containers and the COC. | True   |         |
| Samples are received within Holding Time.  | True   |         |
| Sample containers have legible labels.   | True   |         |
|  |        |         |

True

True

True

True

True

True

N/A

True

True

True

True

True

True

N/A



THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo 10 Hazelwood Drive Amherst, NY 14228-2298 Tel: (716)691-2600

TestAmerica Job ID: 480-40898-1

Client Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Sampling Event: Qtrly Post-Carbon Qtrly Pre-Carbon

#### For:

New York State D.E.C. 270 Michigan Avenue Buffalo, New York 14203

Attn: Mr. Glenn May



Authorized for release by: 7/9/2013 2:19:36 PM

Joe Giacomazza, Project Administrator joe.giacomazza@testamericainc.com

Designee for

Brian Fischer, Project Manager II brian.fischer@testamericainc.com

..... Links .....

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

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Joseph V. giveonoge

Joe Giacomazza

Project Administrator

7/9/2013 2:19:36 PM

TestAmerica Job ID: 480-40898-1

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

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## **Definitions/Glossary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-40898-1

#### **Qualifiers**

#### **GC/MS VOA**

Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

These commonly used abbreviations may or may not be present in this report.

Relative Percent Difference, a measure of the relative difference between two points

Reporting Limit or Requested Limit (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Toxicity Equivalent Quotient (Dioxin)

#### **Metals**

| Qualifier | Qualifier Description   |
|-----------|---|
| В         | Compound was found in the blank and sample.   |
| 1         | Popult is loss than the PL but greater than or equal to the MDL and the concentration is an approximate value |

#### **General Chemistry**

| B Compound was found in the blank and sample.        |  |
|--|--|
| HF Field parameter with a holding time of 15 minutes |  |

# Glossary Abbreviation

RL

RPD

TEF

TEQ

| ¤              | Listed under the "D" column to designate that the result is reported on a dry weight basis                  |
|----------------|---|
| %R             | Percent Recovery  |
| CNF            | Contains no Free Liquid   |
| DER            | Duplicate error ratio (normalized absolute difference)  |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC            | Decision level concentration  |
| MDA            | Minimum detectable activity   |
| EDL            | Estimated Detection Limit   |
| MDC            | Minimum detectable concentration  |
| MDL            | Method Detection Limit  |
| ML             | Minimum Level (Dioxin)  |
| NC             | Not Calculated  |
| ND             | Not detected at the reporting limit (or MDL or EDL if shown)  |
| PQL            | Practical Quantitation Limit  |
| QC             | Quality Control   |
| RER            | Relative error ratio  |
|                |   |

TestAmerica Buffalo

#### **Case Narrative**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-40898-1

Job ID: 480-40898-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-40898-1

#### Receipt

The samples were received on 6/26/2013 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.6° C and 3.6° C.

#### GC/MS VOA

Method(s) 8260B: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-40898-1). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: The following samples were diluted to bring the concentration of target analytes within the calibration range: (480-40898-1 MS), (480-40898-1 MSD), Pre-Carbon (480-40898-1). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: The matrix spike / matrix spike duplicate (MS/MSD) precision for batch 127325 was outside control limits.

No other analytical or quality issues were noted.

#### GC/MS Semi VOA

No analytical or quality issues were noted.

#### Ion Chromatography

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-40898-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

#### GC VOA

Method(s) 8021B: The following sample were diluted to bring the concentration of target analytes within the calibration range: (480-40898-1 MS), (480-40898-1 MSD), Pre-Carbon (480-40898-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

#### GC Semi VOA

No analytical or quality issues were noted.

#### Metals

Method(s) 200.7 Rev 4.4: The Method Blank for batch 480-126324 contained total manganese above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of sample Post-Carbon (480-40899-1) was not performed.

No other analytical or quality issues were noted.

#### **General Chemistry**

Method(s) 310.2: The method blank for batch 126710 contained Alkalinity above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed. Pre-Carbon (480-40898-1)

Method(s) SM 5210B: For batch # 126224, the USB dilution water D.O. depletion was greater than 0.2 mg/L but less than the reporting limit of 2.0 mg/L. The associated sample results are reported. (USB 480-126224/1)

Method(s) SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample(s) has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Post-Carbon (480-40899-1)

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#### **Case Narrative**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-40898-1

### Job ID: 480-40898-1 (Continued)

#### Laboratory: TestAmerica Buffalo (Continued)

No other analytical or quality issues were noted.

#### Organic Prep

No analytical or quality issues were noted.

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Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-40898-1

Lab Sample ID: 480-40898-1

Matrix: Wastewater

Client Sample ID: Pre-Carbon Date Collected: 06/26/13 14:45

Date Received: 06/26/13 15:00

| Analyte                      | Result    | Qualifier | RL       | MDL | Unit | D | Prepared | Analyzed       | Dil Fa |
|------------------------------|-----------|-----------|----------|-----|------|---|----------|----------------|--------|
| 1,1,1-Trichloroethane        | ND        |           | 40       | 33  | ug/L |   |          | 06/29/13 01:33 | 40     |
| 1,1,2,2-Tetrachloroethane    | ND        |           | 40       | 8.4 | ug/L |   |          | 06/29/13 01:33 | 40     |
| 1,1,2-Trichloroethane        | ND        |           | 40       | 9.2 | ug/L |   |          | 06/29/13 01:33 | 40     |
| 1,1-Dichloroethane           | ND        |           | 40       | 15  | ug/L |   |          | 06/29/13 01:33 | 40     |
| 1,1-Dichloroethene           | ND        |           | 40       | 12  | ug/L |   |          | 06/29/13 01:33 | 40     |
| 1,2-Dichloroethane           | ND        |           | 40       | 8.4 | ug/L |   |          | 06/29/13 01:33 | 40     |
| 1,2-Dichloroethene, Total    | ND        |           | 80       | 28  | ug/L |   |          | 06/29/13 01:33 | 40     |
| 1,2-Dichloropropane          | ND        |           | 40       | 29  | ug/L |   |          | 06/29/13 01:33 | 40     |
| 2-Hexanone                   | ND        |           | 200      | 50  | ug/L |   |          | 06/29/13 01:33 | 40     |
| 2-Butanone (MEK)             | ND        |           | 400      | 53  | ug/L |   |          | 06/29/13 01:33 | 40     |
| 4-Methyl-2-pentanone (MIBK)  | ND        |           | 200      | 84  | ug/L |   |          | 06/29/13 01:33 | 40     |
| Acetone                      | ND        |           | 400      | 120 | ug/L |   |          | 06/29/13 01:33 | 40     |
| Bromodichloromethane         | ND        |           | 40       | 16  | ug/L |   |          | 06/29/13 01:33 | 40     |
| Bromoform                    | ND        |           | 40       | 10  | ug/L |   |          | 06/29/13 01:33 | 40     |
| Bromomethane                 | ND        |           | 40       | 28  | ug/L |   |          | 06/29/13 01:33 | 40     |
| Carbon disulfide             | ND        |           | 40       | 7.6 | ug/L |   |          | 06/29/13 01:33 | 4(     |
| Carbon tetrachloride         | ND        |           | 40       | 11  | ug/L |   |          | 06/29/13 01:33 | 40     |
| Chlorobenzene                | ND        |           | 40       | 30  | ug/L |   |          | 06/29/13 01:33 | 40     |
| Dibromochloromethane         | ND        |           | 40       | 13  | ug/L |   |          | 06/29/13 01:33 | 4(     |
| Chloroethane                 | ND        |           | 40       | 13  | ug/L |   |          | 06/29/13 01:33 | 40     |
| Chloroform                   | 17        | J         | 40       | 14  | ug/L |   |          | 06/29/13 01:33 | 40     |
| Chloromethane                | ND        |           | 40       | 14  | ug/L |   |          | 06/29/13 01:33 | 40     |
| cis-1,3-Dichloropropene      | ND        |           | 40       | 14  | ug/L |   |          | 06/29/13 01:33 | 40     |
| Ethylbenzene                 | 1500      |           | 40       | 30  | ug/L |   |          | 06/29/13 01:33 | 40     |
| Methylene Chloride           | ND        |           | 40       | 18  | ug/L |   |          | 06/29/13 01:33 | 40     |
| Styrene                      | ND        |           | 40       | 29  | ug/L |   |          | 06/29/13 01:33 | 40     |
| Tetrachloroethene            | ND        |           | 40       | 14  | ug/L |   |          | 06/29/13 01:33 | 40     |
| Toluene                      | 3700      |           | 40       | 20  | ug/L |   |          | 06/29/13 01:33 | 40     |
| trans-1,3-Dichloropropene    | ND        |           | 40       | 15  | ug/L |   |          | 06/29/13 01:33 | 40     |
| Trichloroethene              | ND        |           | 40       | 18  | ug/L |   |          | 06/29/13 01:33 | 40     |
| Vinyl chloride               | ND        |           | 40       | 36  | ug/L |   |          | 06/29/13 01:33 | 4(     |
| Vinyl acetate                | ND        |           | 200      | 34  | ug/L |   |          | 06/29/13 01:33 | 40     |
| Xylenes, Total               | 920       |           | 80       | 26  | ug/L |   |          | 06/29/13 01:33 | 40     |
| Surrogate                    | %Recovery | Qualifier | Limits   |     |      |   | Prepared | Analyzed       | Dil Fa |
| 1,2-Dichloroethane-d4 (Surr) | 100       |           | 66 - 137 |     |      | _ |          | 06/29/13 01:33 | 4      |
| Toluene-d8 (Surr)            | 101       |           | 71 - 126 |     |      |   |          | 06/29/13 01:33 | 4      |
| 4-Bromofluorobenzene (Surr)  | 103       |           | 73 - 120 |     |      |   |          | 06/29/13 01:33 | 4      |

|                              |           |           | _        |     |      |   |          |                |         |  |
|------------------------------|-----------|-----------|----------|-----|------|---|----------|----------------|---------|--|
| Analyte                      | Result    | Qualifier | RL       | MDL | Unit | D | Prepared | Analyzed       | Dil Fac |  |
| Benzene                      | 7600      |           | 200      | 82  | ug/L |   |          | 07/03/13 13:18 | 200     |  |
| Surrogate                    | %Recovery | Qualifier | Limits   |     |      |   | Prepared | Analyzed       | Dil Fac |  |
| 1,2-Dichloroethane-d4 (Surr) | 99        |           | 66 - 137 |     |      | _ |          | 07/03/13 13:18 | 200     |  |
| Toluene-d8 (Surr)            | 98        |           | 71 - 126 |     |      |   |          | 07/03/13 13:18 | 200     |  |
| 4-Bromofluorobenzene (Surr)  | 97        |           | 73 - 120 |     |      |   |          | 07/03/13 13:18 | 200     |  |

TestAmerica Buffalo

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Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-40898-1

Lab Sample ID: 480-40898-1

Matrix: Wastewater

Client Sample ID: Pre-Carbon Date Collected: 06/26/13 14:45

| Method: 8021B - Volatile Orga | anic Compounds ( | GC)       |          |      |      |   |          |                |         |
|-------------------------------|------------------|-----------|----------|------|------|---|----------|----------------|---------|
| Analyte                       | Result           | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
| 1,2,4-Trimethylbenzene        | 27               |           | 2.0      | 0.35 | ug/L |   |          | 07/01/13 11:07 | 10      |
| 1,3,5-Trimethylbenzene        | ND               |           | 2.0      | 1.5  | ug/L |   |          | 07/01/13 11:07 | 10      |
| Isopropylbenzene              | ND               |           | 2.0      | 0.27 | ug/L |   |          | 07/01/13 11:07 | 10      |
| Methyl tert-butyl ether       | ND               |           | 4.0      | 0.44 | ug/L |   |          | 07/01/13 11:07 | 10      |
| m,p-Xylene                    | 390              |           | 4.0      | 0.54 | ug/L |   |          | 07/01/13 11:07 | 10      |
| n-Butylbenzene                | ND               |           | 2.0      | 0.31 | ug/L |   |          | 07/01/13 11:07 | 10      |
| n-Propylbenzene               | ND               |           | 2.0      | 1.3  | ug/L |   |          | 07/01/13 11:07 | 10      |
| o-Xylene                      | 210              |           | 2.0      | 0.27 | ug/L |   |          | 07/01/13 11:07 | 10      |
| p-Cymene                      | ND               |           | 2.0      | 0.30 | ug/L |   |          | 07/01/13 11:07 | 10      |
| sec-Butylbenzene              | ND               |           | 2.0      | 0.20 | ug/L |   |          | 07/01/13 11:07 | 10      |
| Xylenes, Total                | 600              |           | 6.0      | 0.54 | ug/L |   |          | 07/01/13 11:07 | 10      |
| Surrogate                     | %Recovery        | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene        | 94               |           | 63 - 145 |      |      | - |          | 07/01/13 11:07 | 10      |
| 4-Bromofluorobenzene          | 108              |           | 64 - 141 |      |      |   |          | 07/01/13 11:07 | 10      |

| Analyte                | Result    | Qualifier | RL       | MDL | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------|-----------|-----------|----------|-----|------|---|----------|----------------|---------|
| Ethylbenzene           | 960       |           | 20       | 2.9 | ug/L |   |          | 07/01/13 12:00 | 100     |
| Toluene                | 2600      |           | 20       | 3.6 | ug/L |   |          | 07/01/13 12:00 | 100     |
| Surrogate              | %Recovery | Qualifier | Limits   |     |      |   | Prepared | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene | 98        |           | 63 - 145 |     |      | - |          | 07/01/13 12:00 | 100     |
| 4-Bromofluorobenzene   | 108       |           | 64 - 141 |     |      |   |          | 07/01/13 12:00 | 100     |

| Method: 8021B - Volatile Org | ganic Compounds ( | (GC) - DL2 |          |     |      |   |          |                |         |
|------------------------------|-------------------|------------|----------|-----|------|---|----------|----------------|---------|
| Analyte                      | Result            | Qualifier  | RL       | MDL | Unit | D | Prepared | Analyzed       | Dil Fac |
| Benzene                      | 6700              |            | 100      | 12  | ug/L |   |          | 07/01/13 13:34 | 500     |
| Surrogate                    | %Recovery         | Qualifier  | Limits   |     |      |   | Prepared | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene       | 94                |            | 63 - 145 |     |      | - |          | 07/01/13 13:34 | 500     |
| 4-Bromofluorobenzene         | 105               |            | 64 - 141 |     |      |   |          | 07/01/13 13:34 | 500     |

| Analyte   | Result ( | Qualifier   | RL   | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
|-----------|----------|-------------|------|------|------|---|----------------|----------------|---------|
| Calcium   | 144000   | <del></del> | 500  | 100  | ug/L |   | 06/27/13 13:30 | 06/28/13 22:37 | 1       |
| Iron      | 787      |             | 50.0 | 19.3 | ug/L |   | 06/27/13 13:30 | 06/28/13 22:37 | 1       |
| Magnesium | 96800    |             | 200  | 43.4 | ug/L |   | 06/27/13 13:30 | 06/28/13 22:37 | 1       |
| Potassium | 5940     |             | 500  | 100  | ug/L |   | 06/27/13 13:30 | 06/28/13 22:37 | 1       |
| Sodium    | 75200    |             | 1000 | 324  | ug/L |   | 06/27/13 13:30 | 06/28/13 22:37 | 1       |

| General Chemistry |        |           |      |      |      |   |          |                |         |
|-------------------|--------|-----------|------|------|------|---|----------|----------------|---------|
| Analyte           | Result | Qualifier | RL   | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
| Chloride          | 119    |           | 2.5  | 1.4  | mg/L |   |          | 06/29/13 00:40 | 5       |
| Sulfate           | 167    |           | 10.0 | 1.7  | mg/L |   |          | 06/29/13 00:40 | 5       |
| Alkalinity, Total | 544    | В         | 100  | 40.0 | mg/L |   |          | 06/28/13 19:39 | 10      |

TestAmerica Buffalo

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

**Client Sample ID: Post-Carbon** 

Date Collected: 06/26/13 14:30 Date Received: 06/26/13 15:00 Lab Sample ID: 480-40899-1

**Matrix: Wastewater** 

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| 1,1,1-Trichloroethane       | ND     |           | 1.0 | 0.82 | ug/L |   |          | 07/01/13 15:24 | 1       |
| 1,1,2,2-Tetrachloroethane   | ND     |           | 1.0 | 0.21 | ug/L |   |          | 07/01/13 15:24 | 1       |
| 1,1,2-Trichloroethane       | ND     |           | 1.0 | 0.23 | ug/L |   |          | 07/01/13 15:24 | 1       |
| 1,1-Dichloroethane          | ND     |           | 1.0 | 0.38 | ug/L |   |          | 07/01/13 15:24 | 1       |
| 1,1-Dichloroethene          | ND     |           | 1.0 | 0.29 | ug/L |   |          | 07/01/13 15:24 | 1       |
| 1,2-Dichloroethane          | ND     |           | 1.0 | 0.21 | ug/L |   |          | 07/01/13 15:24 | 1       |
| 1,2-Dichloroethene, Total   | ND     |           | 2.0 | 0.70 | ug/L |   |          | 07/01/13 15:24 | 1       |
| 1,2-Dichloropropane         | ND     |           | 1.0 | 0.72 | ug/L |   |          | 07/01/13 15:24 | 1       |
| 2-Hexanone                  | ND     |           | 5.0 | 1.2  | ug/L |   |          | 07/01/13 15:24 | 1       |
| 2-Butanone (MEK)            | ND     |           | 10  | 1.3  | ug/L |   |          | 07/01/13 15:24 | 1       |
| 4-Methyl-2-pentanone (MIBK) | ND     |           | 5.0 | 2.1  | ug/L |   |          | 07/01/13 15:24 | 1       |
| Acetone                     | ND     |           | 10  | 3.0  | ug/L |   |          | 07/01/13 15:24 | 1       |
| Benzene                     | ND     |           | 1.0 | 0.41 | ug/L |   |          | 07/01/13 15:24 | 1       |
| Bromodichloromethane        | ND     |           | 1.0 | 0.39 | ug/L |   |          | 07/01/13 15:24 | 1       |
| Bromoform                   | ND     |           | 1.0 | 0.26 | ug/L |   |          | 07/01/13 15:24 | 1       |
| Bromomethane                | ND     |           | 1.0 | 0.69 | ug/L |   |          | 07/01/13 15:24 | 1       |
| Carbon disulfide            | ND     |           | 1.0 | 0.19 | ug/L |   |          | 07/01/13 15:24 | 1       |
| Carbon tetrachloride        | ND     |           | 1.0 | 0.27 | ug/L |   |          | 07/01/13 15:24 | 1       |
| Chlorobenzene               | ND     |           | 1.0 | 0.75 | ug/L |   |          | 07/01/13 15:24 | 1       |
| Dibromochloromethane        | ND     |           | 1.0 | 0.32 | ug/L |   |          | 07/01/13 15:24 | 1       |
| Chloroethane                | ND     |           | 1.0 | 0.32 | ug/L |   |          | 07/01/13 15:24 | 1       |
| Chloroform                  | ND     |           | 1.0 | 0.34 | ug/L |   |          | 07/01/13 15:24 | 1       |
| Chloromethane               | ND     |           | 1.0 | 0.35 | ug/L |   |          | 07/01/13 15:24 | 1       |
| cis-1,3-Dichloropropene     | ND     |           | 1.0 | 0.36 | ug/L |   |          | 07/01/13 15:24 | 1       |
| Ethylbenzene                | ND     |           | 1.0 | 0.74 | ug/L |   |          | 07/01/13 15:24 | 1       |
| Methylene Chloride          | ND     |           | 1.0 | 0.44 | ug/L |   |          | 07/01/13 15:24 | 1       |
| Styrene                     | ND     |           | 1.0 | 0.73 | ug/L |   |          | 07/01/13 15:24 | 1       |
| Tetrachloroethene           | ND     |           | 1.0 | 0.36 | ug/L |   |          | 07/01/13 15:24 | 1       |
| Toluene                     | ND     |           | 1.0 | 0.51 | ug/L |   |          | 07/01/13 15:24 | 1       |
| trans-1,3-Dichloropropene   | ND     |           | 1.0 | 0.37 | ug/L |   |          | 07/01/13 15:24 | 1       |
| Trichloroethene             | ND     |           | 1.0 | 0.46 | ug/L |   |          | 07/01/13 15:24 | 1       |
| Vinyl chloride              | ND     |           | 1.0 |      | ug/L |   |          | 07/01/13 15:24 | 1       |
| Vinyl acetate               | ND     |           | 5.0 | 0.85 | ug/L |   |          | 07/01/13 15:24 | 1       |
| Xylenes, Total              | ND     |           | 2.0 |      | ug/L |   |          | 07/01/13 15:24 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 100       |           | 66 - 137 |          | 07/01/13 15:24 | 1       |
| Toluene-d8 (Surr)            | 104       |           | 71 - 126 |          | 07/01/13 15:24 | 1       |
| 4-Bromofluorobenzene (Surr)  | 100       |           | 73 - 120 |          | 07/01/13 15:24 | 1       |

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

| Analyte              | Result | Qualifier | RL  | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
|----------------------|--------|-----------|-----|------|------|---|----------------|----------------|---------|
| 2-Methylnaphthalene  | ND     |           | 5.1 | 0.62 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Acenaphthene         | ND     |           | 5.1 | 0.42 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Acenaphthylene       | ND     |           | 5.1 | 0.39 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Anthracene           | ND     |           | 5.1 | 0.29 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Benzo[a]anthracene   | ND     |           | 5.1 | 0.37 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Benzo[a]pyrene       | ND     |           | 5.1 | 0.48 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Benzo[b]fluoranthene | ND     |           | 5.1 | 0.35 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Benzo[g,h,i]perylene | ND     |           | 5.1 | 0.36 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
|                      |        |           |     |      |      |   |                |                |         |

TestAmerica Buffalo

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Client Sample ID: Post-Carbon

Date Collected: 06/26/13 14:30 Date Received: 06/26/13 15:00

Nitrobenzene-d5

p-Terphenyl-d14

Phenol-d5

Lab Sample ID: 480-40899-1

06/27/13 14:23

06/27/13 14:23 06/28/13 14:43

06/28/13 14:43

**Matrix: Wastewater** 

| Analyte                     | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
|-----------------------------|-----------|-----------|----------|------|------|---|----------------|----------------|---------|
| Benzo[k]fluoranthene        | ND        |           | 5.1      | 0.75 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Biphenyl                    | ND        |           | 5.1      | 0.67 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Bis(2-ethylhexyl) phthalate | ND        |           | 5.1      | 1.9  | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Carbazole                   | ND        |           | 5.1      | 0.31 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Chrysene                    | ND        |           | 5.1      | 0.34 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Dibenz(a,h)anthracene       | ND        |           | 5.1      | 0.43 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Dibenzofuran                | ND        |           | 10       | 0.52 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Fluoranthene                | ND        |           | 5.1      | 0.41 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Fluorene                    | ND        |           | 5.1      | 0.37 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Indeno[1,2,3-cd]pyrene      | ND        |           | 5.1      | 0.48 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Naphthalene                 | ND        |           | 5.1      | 0.78 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Pentachlorophenol           | ND        |           | 10       | 2.3  | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Phenanthrene                | ND        |           | 5.1      | 0.45 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Phenol                      | ND        |           | 5.1      | 0.40 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Pyrene                      | ND        |           | 5.1      | 0.35 | ug/L |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| Surrogate                   | %Recovery | Qualifier | Limits   |      |      |   | Prepared       | Analyzed       | Dil Fac |
| 2,4,6-Tribromophenol        | 84        |           | 52 - 132 |      |      |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| 2-Fluorobiphenyl            | 62        |           | 48 - 120 |      |      |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |
| 2-Fluorophenol              | 30        |           | 20 - 120 |      |      |   | 06/27/13 14:23 | 06/28/13 14:43 | 1       |

46 - 120

67 - 150

16 - 120

55

67

25

| Analyte                 | Result Qua      | alifier RL     | MDL   | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------|-----------------|----------------|-------|------|---|----------|----------------|---------|
| 1,2,4-Trimethylbenzene  | ND              | 0.20           | 0.035 | ug/L |   |          | 07/01/13 12:40 | 1       |
| 1,3,5-Trimethylbenzene  | ND              | 0.20           | 0.15  | ug/L |   |          | 07/01/13 12:40 | 1       |
| Benzene                 | ND              | 0.20           | 0.023 | ug/L |   |          | 07/01/13 12:40 | 1       |
| Ethylbenzene            | ND              | 0.20           | 0.029 | ug/L |   |          | 07/01/13 12:40 | 1       |
| Isopropylbenzene        | ND              | 0.20           | 0.027 | ug/L |   |          | 07/01/13 12:40 | 1       |
| Methyl tert-butyl ether | ND              | 0.40           | 0.044 | ug/L |   |          | 07/01/13 12:40 | 1       |
| m,p-Xylene              | ND              | 0.40           | 0.054 | ug/L |   |          | 07/01/13 12:40 | 1       |
| n-Butylbenzene          | ND              | 0.20           | 0.031 | ug/L |   |          | 07/01/13 12:40 | 1       |
| n-Propylbenzene         | ND              | 0.20           | 0.13  | ug/L |   |          | 07/01/13 12:40 | 1       |
| o-Xylene                | ND              | 0.20           | 0.027 | ug/L |   |          | 07/01/13 12:40 | 1       |
| p-Cymene                | ND              | 0.20           | 0.030 | ug/L |   |          | 07/01/13 12:40 | 1       |
| sec-Butylbenzene        | ND              | 0.20           | 0.020 | ug/L |   |          | 07/01/13 12:40 | 1       |
| Toluene                 | ND              | 0.20           | 0.036 | ug/L |   |          | 07/01/13 12:40 | 1       |
| Xylenes, Total          | ND              | 0.60           | 0.054 | ug/L |   |          | 07/01/13 12:40 | 1       |
| Sumanata                | 9/ Pagaramy Our | alifian limita |       |      |   | Dranavad | Amalumad       | Dil Foo |

| Surrogate              | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------|-----------|-----------|----------|----------|----------------|---------|
| a,a,a-Trifluorotoluene | 97        |           | 63 - 145 |          | 07/01/13 12:40 | 1       |
| 4-Bromofluorobenzene   | 109       |           | 64 - 141 |          | 07/01/13 12:40 | 1       |

| Method: 608 - Ord | anochlorina Pos | ticidos in Water |
|-------------------|-----------------|------------------|

| moundar oud Organicomornio i do | noides in TT |           |       |        |      |   |                |                |         |
|---------------------------------|--------------|-----------|-------|--------|------|---|----------------|----------------|---------|
| Analyte                         | Result       | Qualifier | RL    | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Aldrin                          | ND           |           | 0.048 | 0.0064 | ug/L |   | 06/28/13 07:39 | 07/02/13 11:02 | 1       |
| alpha-BHC                       | ND           |           | 0.048 | 0.0064 | ug/L |   | 06/28/13 07:39 | 07/02/13 11:02 | 1       |
| beta-BHC                        | ND           |           | 0.048 | 0.024  | ug/L |   | 06/28/13 07:39 | 07/02/13 11:02 | 1       |

TestAmerica Buffalo

### **Client Sample Results**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

**Client Sample ID: Post-Carbon** 

Date Collected: 06/26/13 14:30 Date Received: 06/26/13 15:00

**Total Dissolved Solids** 

Total Suspended Solids

Analyte

pН

Biochemical Oxygen Demand

Lab Sample ID: 480-40899-1

TestAmerica Job ID: 480-40898-1

Matrix: Wastewater

| Analyte   | Result                            | Qualifier | RL                          | MDL                               | Unit                      | D        | Prepared   | Analyzed   | Dil Fac                |
|---|-----------------------------------|-----------|-----------------------------|-----------------------------------|---------------------------|----------|--|--|------------------------|
| delta-BHC   | ND                                |           | 0.048                       | 0.0096                            | ug/L                      |          | 06/28/13 07:39   | 07/02/13 11:02   | 1                      |
| gamma-BHC (Lindane)   | ND                                |           | 0.048                       | 0.0058                            | ug/L                      |          | 06/28/13 07:39   | 07/02/13 11:02   | 1                      |
| Chlordane (technical)   | ND                                |           | 0.48                        | 0.28                              | ug/L                      |          | 06/28/13 07:39   | 07/02/13 11:02   | 1                      |
| 4,4'-DDD  | ND                                |           | 0.048                       | 0.0089                            | ug/L                      |          | 06/28/13 07:39   | 07/02/13 11:02   | 1                      |
| 4,4'-DDE  | ND                                |           | 0.048                       | 0.011                             | ug/L                      |          | 06/28/13 07:39   | 07/02/13 11:02   | 1                      |
| 4,4'-DDT  | ND                                |           | 0.048                       | 0.011                             | ug/L                      |          | 06/28/13 07:39   | 07/02/13 11:02   | 1                      |
| Dieldrin  | ND                                |           | 0.048                       | 0.0094                            | ug/L                      |          | 06/28/13 07:39   | 07/02/13 11:02   | 1                      |
| Endosulfan I  | ND                                |           | 0.048                       | 0.011                             | ug/L                      |          | 06/28/13 07:39   | 07/02/13 11:02   | 1                      |
| Endosulfan II   | ND                                |           | 0.048                       | 0.012                             | ug/L                      |          | 06/28/13 07:39   | 07/02/13 11:02   | 1                      |
| Endosulfan sulfate  | ND                                |           | 0.048                       | 0.015                             | ug/L                      |          | 06/28/13 07:39   | 07/02/13 11:02   | 1                      |
| Endrin  | ND                                |           | 0.048                       | 0.013                             | ug/L                      |          | 06/28/13 07:39   | 07/02/13 11:02   | 1                      |
| Endrin aldehyde   | ND                                |           | 0.048                       | 0.016                             | ug/L                      |          | 06/28/13 07:39   | 07/02/13 11:02   | 1                      |
| Heptachlor  | ND                                |           | 0.048                       | 0.0082                            | ug/L                      |          | 06/28/13 07:39   | 07/02/13 11:02   | 1                      |
| Heptachlor epoxide  | ND                                |           | 0.048                       | 0.0051                            | ug/L                      |          | 06/28/13 07:39   | 07/02/13 11:02   | 1                      |
| Toxaphene   | ND                                |           | 0.48                        | 0.12                              | ug/L                      |          | 06/28/13 07:39   | 07/02/13 11:02   | 1                      |
| Surrogate   | %Recovery                         | Qualifier | Limits                      |                                   |                           |          | Prepared   | Analyzed   | Dil Fac                |
| DCB Decachlorobiphenyl  | 51                                |           | 23 - 120                    |                                   |                           |          | 06/28/13 07:39   | 07/02/13 11:02   | 1                      |
| Tetrachloro-m-xylene  | 70                                |           | 36 - 120                    |                                   |                           |          | 06/28/13 07:39   | 07/02/13 11:02   | 1                      |
| Method: 200.7 Rev 4.4 - Metals (ICF                           | <b>'</b> )                        |           |                             |                                   |                           |          |  |  |                        |
|   |                                   | Qualifier | D.                          | MDL                               | Unit                      | D        | Prepared   | Analyzed   | Dil Fac                |
| Analyte   | Result                            | Qualifier | RL                          |                                   |                           |          |  | 00/00/10 01 00   | 1                      |
| •   | Result<br>ND                      | Qualifier | 10.0                        | 5.6                               | ug/L                      |          | 06/27/13 13:30   | 06/28/13 21:26   |                        |
| Analyte   |                                   | Quanner   |                             |                                   | ug/L<br>ug/L              |          | 06/27/13 13:30<br>06/27/13 13:30                               | 06/28/13 21:26<br>06/28/13 21:26                               | 1                      |
| Analyte Arsenic   | ND                                | ·         | 10.0                        | 19.3                              | _                         |          |  |  |                        |
| Analyte Arsenic Iron  | ND<br>307                         | В         | 10.0                        | 19.3<br>0.40                      | ug/L                      |          | 06/27/13 13:30   | 06/28/13 21:26   | 1                      |
| Analyte Arsenic Iron Manganese                                | ND<br>307<br>229                  | В         | 10.0<br>50.0<br>3.0         | 19.3<br>0.40                      | ug/L<br>ug/L              |          | 06/27/13 13:30<br>06/27/13 13:30                               | 06/28/13 21:26<br>06/28/13 21:26                               | 1                      |
| Analyte Arsenic Iron Manganese Zinc                           | ND<br>307<br>229<br>4.1           | В         | 10.0<br>50.0<br>3.0<br>10.0 | 19.3<br>0.40                      | ug/L<br>ug/L<br>ug/L      | D_       | 06/27/13 13:30<br>06/27/13 13:30                               | 06/28/13 21:26<br>06/28/13 21:26                               | 1                      |
| Analyte Arsenic Iron Manganese Zinc General Chemistry         | ND<br>307<br>229<br>4.1           | В         | 10.0<br>50.0<br>3.0<br>10.0 | 19.3<br>0.40<br>1.5               | ug/L<br>ug/L<br>ug/L      | <u>D</u> | 06/27/13 13:30<br>06/27/13 13:30<br>06/27/13 13:30             | 06/28/13 21:26<br>06/28/13 21:26<br>06/28/13 21:26             | 1<br>1<br>1            |
| Analyte Arsenic Iron Manganese Zinc General Chemistry Analyte | ND<br>307<br>229<br>4.1<br>Result | В         | 10.0<br>50.0<br>3.0<br>10.0 | 19.3<br>0.40<br>1.5<br><b>MDL</b> | ug/L ug/L ug/L  Unit mg/L | <u>D</u> | 06/27/13 13:30<br>06/27/13 13:30<br>06/27/13 13:30<br>Prepared | 06/28/13 21:26<br>06/28/13 21:26<br>06/28/13 21:26<br>Analyzed | 1<br>1<br>1<br>Dil Fac |

10.0

2.0

RL

4.0

0.100

4.0 mg/L

2.0 mg/L

RL Unit

4.0 mg/L

0.100 SU

D

Prepared

995

ND

ND

7.90 HF

Result Qualifier

06/27/13 18:22

06/26/13 22:59

Analyzed

06/27/13 22:01

06/27/13 14:36

Dil Fac

Client: New York State D.E.C.

Date Received: 06/26/13 15:00

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Lab Sample ID: 480-40898-1

Lab Sample ID: 480-40899-1

**Matrix: Wastewater** 

**Matrix: Wastewater** 

**Client Sample ID: Pre-Carbon** Date Collected: 06/26/13 14:45

|           | Batch    | Batch         |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|---------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method        | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8260B         |     | 40       | 126608 | 06/29/13 01:33 | TRB     | TAL BUF |
| Total/NA  | Analysis | 8260B         | DL  | 200      | 127325 | 07/03/13 13:18 | ND      | TAL BUF |
| Total/NA  | Analysis | 8021B         |     | 10       | 126855 | 07/01/13 11:07 | DB      | TAL BUF |
| Total/NA  | Analysis | 8021B         |     | 10       | 126855 | 07/01/13 11:07 | DB      | TAL BUF |
| Total/NA  | Analysis | 8021B         | DL  | 100      | 126855 | 07/01/13 12:00 | DB      | TAL BUF |
| Total/NA  | Analysis | 8021B         | DL2 | 500      | 126855 | 07/01/13 13:34 | DB      | TAL BUF |
| Total/NA  | Prep     | 200.7         |     |          | 126323 | 06/27/13 13:30 | SS      | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |     | 1        | 126732 | 06/28/13 22:37 | LH      | TAL BUF |
| Total/NA  | Analysis | 300.0         |     | 5        | 126597 | 06/29/13 00:40 | KAC     | TAL BUF |
| Total/NA  | Analysis | 310.2         |     | 10       | 126710 | 06/28/13 19:39 | NH      | TAL BUF |

**Client Sample ID: Post-Carbon** 

Date Collected: 06/26/13 14:30 Date Received: 06/26/13 15:00

|           | Batch    | Batch          |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|----------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Туре     | Method         | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8260B          |     |          | 126871 | 07/01/13 15:24 | RL      | TAL BUI |
| Total/NA  | Prep     | 3510C          |     |          | 126360 | 06/27/13 14:23 | TG      | TAL BUI |
| Total/NA  | Analysis | 8270C          |     | 1        | 126533 | 06/28/13 14:43 | HTL     | TAL BUI |
| Total/NA  | Analysis | 8021B          |     | 1        | 126855 | 07/01/13 12:40 | DB      | TAL BUI |
| Total/NA  | Analysis | 8021B          |     | 1        | 126855 | 07/01/13 12:40 | DB      | TAL BUI |
| Total/NA  | Prep     | 3510C          |     |          | 126487 | 06/28/13 07:39 | MZ      | TAL BU  |
| Total/NA  | Analysis | 608            |     | 1        | 127051 | 07/02/13 11:02 | LW      | TAL BU  |
| Total/NA  | Prep     | 3510C          |     |          | 126487 | 06/28/13 07:39 | MZ      | TAL BU  |
| Total/NA  | Analysis | 608            |     | 1        | 127051 | 07/02/13 11:02 | LW      | TAL BU  |
| Total/NA  | Prep     | 200.7          |     |          | 126324 | 06/27/13 13:30 | SS      | TAL BU  |
| Total/NA  | Analysis | 200.7 Rev 4.4  |     | 1        | 126731 | 06/28/13 21:26 | LH      | TAL BU  |
| Total/NA  | Analysis | SM 5210B       |     | 1        | 126224 | 06/26/13 22:59 | KS      | TAL BU  |
| Total/NA  | Analysis | SM 2540D       |     | 1        | 126395 | 06/27/13 22:01 | KS      | TAL BU  |
| Total/NA  | Analysis | SM 2540C       |     | 1        | 126410 | 06/27/13 18:22 | KS      | TAL BU  |
| Total/NA  | Analysis | SM 4500 H+ B   |     | 1        | 126418 | 06/27/13 14:36 | ML      | TAL BU  |
| Total/NA  | Prep     | Distill/CN     |     |          | 126527 | 06/28/13 09:18 | KWJ     | TAL BU  |
| Total/NA  | Analysis | 335.4          |     | 2        | 126687 | 06/28/13 18:09 | KWJ     | TAL BU  |
| Total/NA  | Prep     | Distill/Phenol |     |          | 126744 | 06/29/13 01:00 | JB      | TAL BU  |
| Total/NA  | Analysis | 420.4          |     | 1        | 126806 | 06/29/13 14:53 | RB      | TAL BU  |
| Total/NA  | Prep     | 1664A          |     |          | 127230 | 07/03/13 02:28 | LAW     | TAL BU  |
| Total/NA  | Analysis | 1664A          |     | 1        | 127231 | 07/03/13 02:46 | LAW     | TAL BU  |

#### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TestAmerica Buffalo

TestAmerica Job ID: 480-40898-1

Client: New York State D.E.C. Project/Site: NYSDEC-Gastown WWTP: Site# 915171

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### **Laboratory: TestAmerica Buffalo**

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority         | Program       | EPA Region    | Certification ID | <b>Expiration Date</b> |
|-------------------|---------------|---------------|------------------|------------------------|
| Arkansas DEQ      | State Program | 6             | 88-0686          | 07-06-13 *             |
| California        | NELAP         | 9             | 1169CA           | 09-30-13               |
| Connecticut       | State Program | 1             | PH-0568          | 09-30-14               |
| Florida           | NELAP         | 4             | E87672           | 06-30-14               |
| Georgia           | State Program | 4             | N/A              | 03-31-14               |
| Georgia           | State Program | 4             | 956              | 03-31-14               |
| Illinois          | NELAP         | 5             | 200003           | 09-30-13               |
| owa               | State Program | 7             | 374              | 03-15-15               |
| Kansas            | NELAP         | 7             | E-10187          | 01-31-14               |
| Kentucky          | State Program | 4             | 90029            | 12-31-13               |
| Kentucky (UST)    | State Program | 4             | 30               | 04-01-14               |
| _ouisiana         | NELAP         | 6             | 02031            | 06-30-14               |
| Maine             | State Program | 1             | NY00044          | 12-04-13               |
| Maryland          | State Program | 3             | 294              | 03-31-14               |
| Massachusetts     | State Program | 1             | M-NY044          | 06-30-14               |
| Michigan          | State Program | 5             | 9937             | 04-01-14               |
| Minnesota         | NELAP         | 5             | 036-999-337      | 12-31-13               |
| New Hampshire     | NELAP         | 1             | 2973             | 09-11-13               |
| New Hampshire     | NELAP         | 1             | 2337             | 11-17-13               |
| New Jersey        | NELAP         | 2             | NY455            | 06-30-13 *             |
| New York          | NELAP         | 2             | 10026            | 04-01-14               |
| North Dakota      | State Program | 8             | R-176            | 03-31-14               |
| Oklahoma          | State Program | 6             | 9421             | 08-31-13               |
| Oregon            | NELAP         | 10            | NY200003         | 06-09-14               |
| Pennsylvania      | NELAP         | 3             | 68-00281         | 07-31-13               |
| Rhode Island      | State Program | 1             | LAO00328         | 12-31-13               |
| Tennessee         | State Program | 4             | TN02970          | 04-01-14               |
| Texas             | NELAP         | 6             | T104704412-11-2  | 07-31-13               |
| JSDA              | Federal       | P330-11-00386 |                  | 11-22-14               |
| ∕irginia          | NELAP         | 3 460185      |                  | 09-14-13               |
| Washington        | State Program | 10 C784       |                  | 02-10-14               |
| West Virginia DEP | State Program | 3             | 09-30-13         |                        |
| Wisconsin         | State Program | 5             | 998310390        | 08-31-13               |

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<sup>\*</sup> Expired certification is currently pending renewal and is considered valid.

### **Method Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-40898-1

| lethod       | Method Description                     | Protocol  | Laboratory |
|--------------|--|-----------|------------|
| 260B         | Volatile Organic Compounds (GC/MS)     | SW846     | TAL BUF    |
| 270C         | Semivolatile Organic Compounds (GC/MS) | SW846     | TAL BUF    |
| 021B         | Volatile Organic Compounds (GC)        | SW846     | TAL BUF    |
| 08           | Organochlorine Pesticides in Water     | 40CFR136A | TAL BUF    |
| 00.7 Rev 4.4 | Metals (ICP)                           | EPA       | TAL BUF    |
| 664A         | HEM and SGT-HEM                        | 1664A     | TAL BUF    |
| 0.00         | Anions, Ion Chromatography             | MCAWW     | TAL BUF    |
| 10.2         | Alkalinity                             | MCAWW     | TAL BUF    |
| 35.4         | Cyanide, Total                         | MCAWW     | TAL BUF    |
| 20.4         | Phenolics, Total Recoverable           | MCAWW     | TAL BUF    |
| M 2540C      | Solids, Total Dissolved (TDS)          | SM        | TAL BUF    |
| M 2540D      | Solids, Total Suspended (TSS)          | SM        | TAL BUF    |
| M 4500 H+ B  | pH                                     | SM        | TAL BUF    |
| M 5210B      | BOD, 5-Day                             | SM        | TAL BUF    |

#### Protocol References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### **Laboratory References:**

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TestAmerica Buffalo

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### **Sample Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-40898-1

| Lab Sample ID | Client Sample ID | Matrix     | Collected      | Received       |
|---------------|------------------|------------|----------------|----------------|
| 480-40898-1   | Pre-Carbon       | Wastewater | 06/26/13 14:45 | 06/26/13 15:00 |
| 480-40899-1   | Post-Carbon      | Wastewater | 06/26/13 14:30 | 06/26/13 15:00 |

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#### TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298 Phone (716) 691-2600 Fax (716) 691-7991

## **Chain of Custody Record**

<u>TestAmerica</u>

THE LEADER IN ENVIRONMENTAL TESTING

| Phone (716) 691-2600 Fax (716) 691-7991   | Comples                 | 72         |                            | II ab f   | D14:              |                                |                         |                                |                                |                           |         | 10-     | - T     |          | <b>1</b> 1 - 7 - 1 |         |              | I COO N  |
|---|-------------------------|------------|----------------------------|---|-------------------|--------------------------------|-------------------------|--------------------------------|--------------------------------|---------------------------|---------|---------|---------|----------|--------------------|---------|--------------|--|
| Client Information Client Contact:  | Sampler: Mu             | Kesz       | V                          |   | her, B            | rian                           |                         |                                |                                |                           |         | Ca      | mier Tr | acking   | No(s):             |         |              | COC No:<br>480-8788-1179.1   |
| Thomas Palmer   | Phone: 484              | 645        | 2302                       | E-Ma<br>briar                                   | ail:<br>n.fisch   | ner@t                          | estam                   | ericai                         | inc.co                         | om                        |         |         |         |          |                    |         |              | Page:<br>Page 1 of 1   |
| Company: Groundwater & Environmental Services Inc   |                         |            |                            |   |                   |                                |                         |                                | Aı                             | nalys                     | is F    | Reaue   | estec   | 1        |                    |         |              | Job#:  |
| Address:  | Due Date Request        | ed:        |                            |   |                   | T                              | T                       |                                |                                |                           | T       |         |         | Т        | П                  | Т       |              | Preservation Codes:  |
| 495 Aero Drive Suite 3<br>City:   | TAT Requested (da       | ave).      |                            |   | - 8               |                                |                         |                                |                                |                           |         |         |         |          |                    |         |              | A - HCL M - Hexane   |
| Cheektowaga   | 1                       |            |                            |   | 100               |                                |                         |                                |                                |                           |         |         |         |          |                    |         |              | B - NaOH N - None<br>C - Zn Acetate O - AsNaO2                               |
| State, Zip:<br>NY, 14225  |                         | STA        |                            |   |                   |                                |                         |                                |                                |                           |         |         |         |          |                    |         |              | D - Nitric Acid P - Na2O4S<br>E - NaHSO4 Q - Na2SO3<br>F - MeOH R - Na2S2SO3 |
| Phone:  | PO #:<br>Purchase Order | not requir |                            |   |                   |                                |                         |                                | - 8021                         |                           |         |         |         |          |                    |         |              | G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate                |
| Email:  | WO #:                   |            |                            |   | or No             | ۰                              |                         |                                | A - 8                          |                           |         |         |         |          |                    |         |              | I - Ice U - Acetone J - DI Water V - MCAA                                    |
| tpalmer@gesonline.com Project Name:   | Project #:              |            |                            |   | S S               | ethod                          | -                       | M04.:                          | ٥,                             |                           |         |         |         |          |                    |         | ners         | K - EDTA W - ph 4-5  |
| NYSDEC - Gastown WWTP/Gastown Event Desc: Qtrly Pre-Carb  | 48002525                |            |                            |   | 90                | cal N                          | et e                    | t o                            | List                           | _                         |         |         |         |          |                    |         | containers   | L - EDA Z - other (specify)  |
| Site:<br>New York   | SSOW#:                  |            |                            |   | Samp              | ور<br>اور<br>اور               | ocal M                  | CL lis                         | TARS                           | , Tota                    |         |         |         |          |                    |         | 5            |  |
|   |                         | Sample     | Sample<br>Type<br>(C=comp, | Matrix<br>(w=water,<br>S=solid,<br>O=waste/oil, | Field Filtered    | 300.0 28D - (MOD) Local Method | .7 - (MOD) Local Method | 8260B - (MOD) TCL list OLM04.2 | 8021B - (MOD) STARS List - VOA | 310.2 - Atkalinity, Total |         |         |         |          |                    |         | Total Number |  |
| Sample Identification   | Sample Date             | Time       |                            | tion Code:                                      | 果                 |                                |                         | -                              | ECONOMIC .                     | BOOKS BUT                 |         |         | 2 22    |          |                    |         | P            | Special Instructions/Note:   |
|   | 1/20/-                  |            |                            |   | W.                | N                              | D                       | Α                              | A                              | N                         | 105     | 2-83    |         |          |                    | +       | +            |  |
| Pre-Carbon Pre-Carbon   | 42413                   | 1445       | 6                          | Water   | M                 | 4-                             | 1                       |                                |                                |                           | $\perp$ | $\perp$ | $\perp$ |          | Ш                  | $\perp$ |              |  |
|   |                         |            |                            |   | Ш                 |                                |                         |                                |                                |                           |         |         |         |          |                    |         |              |  |
|   |                         |            |                            |   | П                 |                                |                         |                                |                                |                           |         |         |         |          |                    |         |              |  |
|   |                         |            |                            |   | $\dagger \dagger$ | $\top$                         | T                       |                                |                                |                           | $\top$  | $\top$  | $\top$  |          | $\vdash$           | $\top$  |              |  |
|   |                         |            |                            |   | ₩                 | +                              | +                       | Н                              |                                | $\vdash$                  | +       | +       | +       | .'       |                    | '       | leaning.     |  |
|   |                         |            |                            |   | ₩                 | +                              | +-                      | $\vdash$                       |                                | $\vdash$                  | +       | +       | +       |          |                    |         |              |  |
|   |                         |            |                            |   | Ш.                | $\perp$                        | _                       |                                |                                |                           | _       | $\perp$ | $\perp$ |          |                    |         | Ш            |  |
|   |                         |            |                            |   | Ш                 |                                |                         |                                |                                |                           |         |         |         |          |                    |         |              |  |
|   |                         |            |                            |   | П                 |                                |                         |                                |                                |                           |         |         | $\top$  |          | 480-4              | 089     | 8 Ch         | nain of Custody  |
|   |                         |            |                            |   | $\dagger \dagger$ | +                              | $^{\dagger}$            |                                |                                |                           | $\top$  | $\top$  | +       | Ì        | ΙI                 | 1       |              |  |
|   |                         |            |                            |   | ++                | +                              | +                       | $\vdash$                       |                                |                           | +       | +       | +       | $\vdash$ | $\vdash$           | +       | +            |  |
|   |                         |            |                            |   | ₩                 | +                              | +                       | $\vdash$                       |                                | $\vdash$                  | +       | +       | +       | -        | $\vdash$           | +       |              |  |
|   |                         |            |                            |   | Щ                 |                                |                         |                                |                                |                           |         |         |         |          |                    |         |              |  |
| Possible Hazard Identification  | B Onknow                |            |                            |   | s                 |                                |                         |                                |                                |                           | y be    | asse    | ssed i  | f san    | iples a            |         |              | d longer than 1 month)   |
| Non-Hazard Flammable Skin Irritant Poison  Deliverable Requested: I, II, III, IV, Other (specify) | B FUnknow               | n Rad      | liological                 |   | -                 |                                | Return                  |                                |                                | t<br>C Requ               | irom    | Dispo   | sal B   | y Lab    |                    |         | drchiv       | ve For Months  |
| ,   |                         |            |                            |   |                   |                                | li iiiou                |                                | Δ                              | o requ                    | an en   | ierits. |         |          |                    |         |              |  |
| Empty Kit Relinquished by:  |                         | Date:      |                            |   | Time              |                                |                         | $\perp$                        | 11                             |                           |         |         | Met     | hod of   | Shipme             |         |              |  |
| Relinquished by:  | Date/Time:              | 1/13       | 1500                       | Company   |                   | Re                             | ceived                  | by:                            | Λ                              | M                         | 1       | 10      | W       | 1~       | Date/T             | ime:    | 01           | 26/13/500 TA   |
| Relinquished by:  | Date/Time:              | /          |                            | Company   |                   | Re                             | ceived                  | by:                            |                                |                           |         |         |         | V        | Date/T             | ime:    |              | Company  |
| Relinquished by:  | Date/Time:              |            |                            | Company   |                   | Re                             | ceived                  | by:                            |                                |                           |         |         |         |          | Date/T             | ime:    |              | Company  |
| Custody Seals Intact: Custody Seal No.: Δ Yes Δ No  |                         |            |                            |   |                   | Co                             | oler Ter                | mperati                        | ure(s)                         | °C and                    | Othe    | Remar   | ks:     |          | 3.                 |         | Ī.           | CEHI   |

10 Hazelwood Drive

Amherst, NY 14228-2298

### **Chain of Custody Record**



Phone (716) 691-2600 Fax (716) 691-7991 Carrier Tracking No(s): 480-8775-1178.1 Fischer, Brian Client Information Page: E-Mail: Page 1 of 1 Client Contact: brian.fischer@testamericainc.com Thomas Palmer **Analysis Requested** Company: Groundwater & Environmental Services Inc Preservation Codes: Due Date Requested: M - Hexane 495 Aero Drive Suite 3 N - None B - NaOH TAT Requested (days): O - AsNaO2 C - Zn Acetate D - Nitric Acid P - Na2O4S Cheektowaga STV. Q - Na2SO3 E - NaHSO4 State, Zip: R - Na2S2SO3 F - MeOH NY, 14225 S - H2SO4 G - Amchlor Phone: 8021B - (MOD) STARS List - VOA - 8021 T - TSP Dodecahydrate H - Ascorbic Acid 5210B - Biochemical Oxygen Demand Purchase Order not requir or No 8270C - (MOD) TCL SVOA - OLM04.2 U - Acetone I - Ice 420.4 - Phenolics, Total Recoverable V - MCAA J - DI Water Email 8260B - (MOD) TCL list OLM04.2 W - ph 4-5 K - EDTA tpalmer@gesonline.com Z - other (specify) L - EDA Project #: 2540D - Total Suspended NYSDEC - Gastown WWTP/Gastown Event Desc: Qtrly Post-Car 48002525 Other: 335.4 - Cyanide, Total 5 SM4500\_H+ - pH New York Total Number Matrix Sample Type S=solid, (C=comp. Sample Special Instructions/Note: G=qrab) BT=Tissue, A=Air Sample Date Time Sample Identification Preservation Code: Water G Post-Carbon 480-40899 Chain of Custody Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Disposal By Lab Archive For Return To Client Months Radiological Poison B Non-Hazard Flammable Skin Irritant Special Instructions/QC Requirements: Deliverable Requested: I, II, III, IV, Other (specify) Method of Shipment Time: Date: Empty Kit Relinquished by: Received by Company Relinquished by: Cd5. Received by Relinguished by: Company Received by Company Date/Time Relinquished by: Cooler Temperature(s) °C and Other Remarks: Custody Seal No. Custody Seals Intact:

Page

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Δ Yes Δ No









#### **Login Sample Receipt Checklist**

Client: New York State D.E.C. Job Number: 480-40898-1

Login Number: 40898 List Source: TestAmerica Buffalo

List Number: 1 Creator: Kolb, Chris M

Question Answer Comment

Radioactivity either was not measured or, if measured, is at or below background

The cooler's custody seal, if present, is intact.

The cooler or samples do not appear to have been compromised or tampered with.

Samples were received on ice.

Cooler Temperature is acceptable.

Cooler Temperature is recorded.

COC is present.

COC is filled out in ink and legible.

COC is filled out with all pertinent information.

Is the Field Sampler's name present on COC?

There are no discrepancies between the sample IDs on the containers and

the COC.

Samples are received within Holding Time.

Sample containers have legible labels.

Containers are not broken or leaking.

Sample collection date/times are provided.

Appropriate sample containers are used.

Sample bottles are completely filled.

Sample Preservation Verified

There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs

VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.

If necessary, staff have been informed of any short hold time or quick TAT needs

Multiphasic samples are not present.

Samples do not require splitting or compositing.

Sampling Company provided.

Samples received within 48 hours of sampling.

Samples requiring field filtration have been filtered in the field.

Chlorine Residual checked.

### Login Sample Receipt Checklist

Client: New York State D.E.C. Job Number: 480-40898-1

Login Number: 40899 List Source: TestAmerica Buffalo

List Number: 1 Creator: Kolb, Chris M

| Question   | Answer | Comment |
|--|--------|---------|
| Radioactivity either was not measured or, if measured, is at or below background | True   |         |
| The cooler's custody seal, if present, is intact.                                | True   |         |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |         |
| Samples were received on ice.  | True   |         |
| Cooler Temperature is acceptable.  | True   |         |
| Cooler Temperature is recorded.  | True   |         |
| COC is present.  | True   |         |
| COC is filled out in ink and legible.  | True   |         |
| COC is filled out with all pertinent information.                                | True   |         |
| Is the Field Sampler's name present on COC?                                      | True   |         |
| There are no discrepancies between the sample IDs on the containers and the COC. | True   |         |
| Samples are received within Holding Time.  | True   |         |
| Sample containers have legible labels.   | True   |         |
| Containers are not broken or leaking.  | True   |         |
| Sample collection date/times are provided.                                       | True   |         |
| Appropriate sample containers are used.  | True   |         |
| Sample bottles are completely filled.  | True   |         |
| Sample Preservation Verified   | True   |         |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |         |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | True   |         |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True   |         |
| Multiphasic samples are not present.   | True   |         |
| Samples do not require splitting or compositing.                                 | True   |         |
| Sampling Company provided.   | True   |         |
| Samples received within 48 hours of sampling.                                    | True   |         |
| Samples requiring field filtration have been filtered in the field.              | True   |         |
| Chlorine Residual checked.   | True   |         |

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THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo 10 Hazelwood Drive Amherst, NY 14228-2298 Tel: (716)691-2600

TestAmerica Job ID: 480-42936-1

Client Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Sampling Event: Mthly Post-Carbon Mthly Pre-Carbon

#### For:

New York State D.E.C. 270 Michigan Avenue Buffalo, New York 14203

Attn: Mr. Glenn May



Authorized for release by: 8/9/2013 11:31:33 AM

Joe Giacomazza, Project Administrator joe.giacomazza@testamericainc.com

Designee for

Brian Fischer, Project Manager II brian.fischer@testamericainc.com

.....LINKS .....

Review your project results through

Total Access

**Have a Question?** 



**Visit us at:** www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

a a

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

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Joseph V. gircomagne

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Joe Giacomazza Project Administrator 8/9/2013 11:31:33 AM

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Project/Site: NYSDEC-Gastown WWTP: Site# 915171

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### **Definitions/Glossary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-42936-1

#### **Qualifiers**

#### **GC/MS VOA**

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### **Metals**

B Compound was found in the blank and sample.

#### **General Chemistry**

| Qualifier | Qualifier Description |
|-----------|-----------------------|
|-----------|-----------------------|

HF Field parameter with a holding time of 15 minutes

#### **Glossary**

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|--------------|---|
|              | ,,,   |

Eisted under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CNF Contains no Free Liquid

DER Duplicate error ratio (normalized absolute difference)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision level concentration
MDA Minimum detectable activity
EDL Estimated Detection Limit

MDC Minimum detectable concentration

MDL Method Detection Limit
ML Minimum Level (Dioxin)
NC Not Calculated

ND Not detected at the reporting limit (or MDL or EDL if shown)

PQL Practical Quantitation Limit

QC Quality Control
RER Relative error ratio

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TestAmerica Buffalo

#### **Case Narrative**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-42936-1

Job ID: 480-42936-1

**Laboratory: TestAmerica Buffalo** 

Narrative

Job Narrative 480-42936-1

#### Receipt

The samples were received on 7/31/2013 4:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt time was 5.2° C.

#### GC/MS VOA

No analytical or quality issues were noted.

#### Ion Chromatography

Method(s) 300.0: The following samples in batch 132087 were diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-42936-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

#### GC VOA

No analytical or quality issues were noted.

#### GC Semi VOA

Method(s) 8021B: The continuing calibration verification (CCV) for analytical batch 132895 recovered outside control limits for surrogates. The recovery in the sample is compliant, therefore, the data have been qualified and reported.

No other analytical or quality issues were noted.

#### Metals

Method(s) 200.7 Rev 4.4: The Method Blank for batch 480-132007 contained total calcium above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of sample Pre-Carbon (480-42936-1) was not performed.

No other analytical or quality issues were noted.

#### **General Chemistry**

Method(s) SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample(s) has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Post-Carbon (480-42937-1)

No other analytical or quality issues were noted.

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### **Client Sample Results**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-42936-1

Lab Sample ID: 480-42936-1

Matrix: Wastewater

Date Collected: 07/31/13 15:10 Date Received: 07/31/13 16:00

**Client Sample ID: Pre-Carbon** 

| Method: 200.7 Rev 4.4 - Metal | • •    |           |      |      |      | _ |                |                |         |
|-------------------------------|--------|-----------|------|------|------|---|----------------|----------------|---------|
| Analyte                       | Result | Qualifier | RL   | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Calcium                       | 132000 | В         | 500  | 100  | ug/L |   | 08/02/13 09:15 | 08/02/13 18:45 | 1       |
| Iron                          | 489    |           | 50.0 | 19.3 | ug/L |   | 08/02/13 09:15 | 08/02/13 18:45 | 1       |
| Magnesium                     | 89500  |           | 200  | 43.4 | ug/L |   | 08/02/13 09:15 | 08/02/13 18:45 | 1       |
| Potassium                     | 6330   |           | 500  | 100  | ug/L |   | 08/02/13 09:15 | 08/02/13 18:45 | 1       |
| Sodium                        | 78500  |           | 1000 | 324  | ug/L |   | 08/02/13 09:15 | 08/02/13 18:45 | 1       |
| -<br>General Chemistry        |        |           |      |      |      |   |                |                |         |
| Analyte                       | Result | Qualifier | RL   | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Chloride                      | 119    |           | 2.5  | 1.4  | mg/L |   |                | 08/02/13 14:31 | 5       |
| Sulfate                       | 163    |           | 10.0 | 1.7  | mg/L |   |                | 08/02/13 14:31 | 5       |
| Alkalinity, Total             | 597    |           | 100  | 40.0 | mg/L |   |                | 08/01/13 12:27 | 10      |

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Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

**Client Sample ID: Post-Carbon** 

Date Collected: 07/31/13 15:00 Date Received: 07/31/13 16:00 Lab Sample ID: 480-42937-1

Matrix: Wastewater

| Analyte                     | Result Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|------------------|-----|------|------|---|----------|----------------|---------|
| 1,1,1-Trichloroethane       | ND ND            | 1.0 | 0.82 | ug/L |   |          | 08/05/13 02:22 | 1       |
| 1,1,2,2-Tetrachloroethane   | ND               | 1.0 | 0.21 | ug/L |   |          | 08/05/13 02:22 | 1       |
| 1,1,2-Trichloroethane       | ND               | 1.0 | 0.23 | ug/L |   |          | 08/05/13 02:22 | 1       |
| 1,1-Dichloroethane          | ND               | 1.0 | 0.38 | ug/L |   |          | 08/05/13 02:22 | 1       |
| 1,1-Dichloroethene          | ND               | 1.0 | 0.29 | ug/L |   |          | 08/05/13 02:22 | 1       |
| 1,2-Dichloroethane          | ND               | 1.0 | 0.21 | ug/L |   |          | 08/05/13 02:22 | 1       |
| 1,2-Dichloroethene, Total   | ND               | 2.0 | 0.70 | ug/L |   |          | 08/05/13 02:22 | 1       |
| 1,2-Dichloropropane         | ND               | 1.0 | 0.72 | ug/L |   |          | 08/05/13 02:22 | 1       |
| 2-Hexanone                  | ND               | 5.0 | 1.2  | ug/L |   |          | 08/05/13 02:22 | 1       |
| 2-Butanone (MEK)            | ND               | 10  | 1.3  | ug/L |   |          | 08/05/13 02:22 | 1       |
| 4-Methyl-2-pentanone (MIBK) | ND               | 5.0 | 2.1  | ug/L |   |          | 08/05/13 02:22 | 1       |
| Acetone                     | ND               | 10  | 3.0  | ug/L |   |          | 08/05/13 02:22 | 1       |
| Benzene                     | 0.42 J           | 1.0 | 0.41 | ug/L |   |          | 08/05/13 02:22 | 1       |
| Bromodichloromethane        | ND               | 1.0 | 0.39 | ug/L |   |          | 08/05/13 02:22 | 1       |
| Bromoform                   | ND               | 1.0 | 0.26 | ug/L |   |          | 08/05/13 02:22 | 1       |
| Bromomethane                | ND               | 1.0 | 0.69 | ug/L |   |          | 08/05/13 02:22 | 1       |
| Carbon disulfide            | ND               | 1.0 | 0.19 | ug/L |   |          | 08/05/13 02:22 | 1       |
| Carbon tetrachloride        | ND               | 1.0 | 0.27 | ug/L |   |          | 08/05/13 02:22 | 1       |
| Chlorobenzene               | ND               | 1.0 | 0.75 | ug/L |   |          | 08/05/13 02:22 | 1       |
| Dibromochloromethane        | ND               | 1.0 | 0.32 | ug/L |   |          | 08/05/13 02:22 | 1       |
| Chloroethane                | ND               | 1.0 | 0.32 | ug/L |   |          | 08/05/13 02:22 | 1       |
| Chloroform                  | ND               | 1.0 | 0.34 | ug/L |   |          | 08/05/13 02:22 | 1       |
| Chloromethane               | ND               | 1.0 | 0.35 | ug/L |   |          | 08/05/13 02:22 | 1       |
| cis-1,3-Dichloropropene     | ND               | 1.0 | 0.36 | ug/L |   |          | 08/05/13 02:22 | 1       |
| Ethylbenzene                | ND               | 1.0 | 0.74 | ug/L |   |          | 08/05/13 02:22 | 1       |
| Methylene Chloride          | ND               | 1.0 | 0.44 | ug/L |   |          | 08/05/13 02:22 | 1       |
| Styrene                     | ND               | 1.0 | 0.73 | ug/L |   |          | 08/05/13 02:22 | 1       |
| Tetrachloroethene           | ND               | 1.0 | 0.36 | ug/L |   |          | 08/05/13 02:22 | 1       |
| Toluene                     | ND               | 1.0 | 0.51 | ug/L |   |          | 08/05/13 02:22 | 1       |
| trans-1,3-Dichloropropene   | ND               | 1.0 | 0.37 | ug/L |   |          | 08/05/13 02:22 | 1       |
| Trichloroethene             | ND               | 1.0 | 0.46 | ug/L |   |          | 08/05/13 02:22 | 1       |
| Vinyl chloride              | ND               | 1.0 | 0.90 | ug/L |   |          | 08/05/13 02:22 | 1       |
| Vinyl acetate               | ND               | 5.0 | 0.85 | ug/L |   |          | 08/05/13 02:22 | 1       |
| Xylenes, Total              | ND               | 2.0 | 0.66 | ug/L |   |          | 08/05/13 02:22 | 1       |

| Surrogate                    | %Recovery | Qualifier Limits | Prepared    | Analyzed       | Dil Fac |
|------------------------------|-----------|------------------|-------------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 103       | 66 - 13          | <del></del> | 08/05/13 02:22 | 1       |
| Toluene-d8 (Surr)            | 98        | 71 - 12          | 3           | 08/05/13 02:22 | 1       |
| 4-Bromofluorobenzene (Surr)  | 101       | 73 - 12          |             | 08/05/13 02:22 | 1       |

| Method: 8021B - | Volatile Organic | Compounds (GC) |
|-----------------|------------------|----------------|
|-----------------|------------------|----------------|

| motrical cozing         | ouuo   | (00)      |      |       |      |   |          |                |         |
|-------------------------|--------|-----------|------|-------|------|---|----------|----------------|---------|
| Analyte                 | Result | Qualifier | RL   | MDL   | Unit | D | Prepared | Analyzed       | Dil Fac |
| 1,2,4-Trimethylbenzene  | ND     |           | 0.20 | 0.035 | ug/L |   |          | 08/08/13 11:34 | 1       |
| 1,3,5-Trimethylbenzene  | ND     |           | 0.20 | 0.15  | ug/L |   |          | 08/08/13 11:34 | 1       |
| Benzene                 | 0.43   |           | 0.20 | 0.023 | ug/L |   |          | 08/08/13 11:34 | 1       |
| Ethylbenzene            | ND     |           | 0.20 | 0.029 | ug/L |   |          | 08/08/13 11:34 | 1       |
| Isopropylbenzene        | ND     |           | 0.20 | 0.027 | ug/L |   |          | 08/08/13 11:34 | 1       |
| Methyl tert-butyl ether | ND     |           | 0.40 | 0.044 | ug/L |   |          | 08/08/13 11:34 | 1       |
| m,p-Xylene              | ND     |           | 0.40 | 0.054 | ug/L |   |          | 08/08/13 11:34 | 1       |
| n-Butylbenzene          | ND     |           | 0.20 | 0.031 | ug/L |   |          | 08/08/13 11:34 | 1       |
|                         |        |           |      |       |      |   |          |                |         |

TestAmerica Buffalo

### **Client Sample Results**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

**Client Sample ID: Post-Carbon** 

Date Collected: 07/31/13 15:00 Date Received: 07/31/13 16:00 Lab Sample ID: 480-42937-1

TestAmerica Job ID: 480-42936-1

Matrix: Wastewater

| Analyte                           | Result    | Qualifier | RL       | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
|-----------------------------------|-----------|-----------|----------|--------|------|---|----------------|----------------|---------|
| n-Propylbenzene                   | ND        |           | 0.20     | 0.13   | ug/L |   |                | 08/08/13 11:34 | 1       |
| o-Xylene                          | ND        |           | 0.20     | 0.027  | ug/L |   |                | 08/08/13 11:34 | 1       |
| p-Cymene                          | ND        |           | 0.20     | 0.030  | ug/L |   |                | 08/08/13 11:34 | 1       |
| sec-Butylbenzene                  | ND        |           | 0.20     | 0.020  | ug/L |   |                | 08/08/13 11:34 | 1       |
| Toluene                           | ND        |           | 0.20     | 0.036  | ug/L |   |                | 08/08/13 11:34 | 1       |
| Xylenes, Total                    | ND        |           | 0.60     | 0.054  | ug/L |   |                | 08/08/13 11:34 | 1       |
| Surrogate                         | %Recovery | Qualifier | Limits   |        |      |   | Prepared       | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene            | 70        |           | 63 - 145 |        |      |   |                | 08/08/13 11:34 | 1       |
| 4-Bromofluorobenzene              | 76        |           | 64 - 141 |        |      |   |                | 08/08/13 11:34 | 1       |
| -<br>Method: 200.7 Rev 4.4 - Meta | Is (ICP)  |           |          |        |      |   |                |                |         |
| Analyte                           | • •       | Qualifier | RL       | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Iron                              | 192       |           | 50.0     | 19.3   | ug/L |   | 08/02/13 09:15 | 08/02/13 18:10 | 1       |
| General Chemistry                 |           |           |          |        |      |   |                |                |         |
| Analyte                           | Result    | Qualifier | RL       | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Cyanide, Total                    | 0.46      |           | 0.010    | 0.0050 | mg/L |   | 08/01/13 18:00 | 08/02/13 13:03 | 1       |
| Analyte                           | Result    | Qualifier | RL       | RL     | Unit | D | Prepared       | Analyzed       | Dil Fac |
| pH                                | 7.80      | HF        | 0.100    | 0.100  | SU   |   |                | 07/31/13 22:08 |         |

#### **Lab Chronicle**

Client: New York State D.E.C.

Date Collected: 07/31/13 15:10

Date Received: 07/31/13 16:00

**Client Sample ID: Pre-Carbon** 

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-42936-1

Lab Sample ID: 480-42936-1

**Matrix: Wastewater** 

Batch Dilution Batch Batch Prepared Prep Type Method Type Run **Factor** Number or Analyzed Analyst Lab Total/NA Prep 200.7 132007 08/02/13 09:15 NMD2 TAL BUF Total/NA Analysis 200.7 Rev 4.4 1 132207 08/02/13 18:45 AMH TAL BUF Total/NA 310.2 10 08/01/13 12:27 RMB TAL BUF Analysis 131902 Total/NA Analysis 300.0 08/02/13 14:31 KRC TAL BUF 5 132087

**Client Sample ID: Post-Carbon** 

Lab Sample ID: 480-42937-1 Date Collected: 07/31/13 15:00

**Matrix: Wastewater** 

Date Received: 07/31/13 16:00

|           | Batch    | Batch         |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|---------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method        | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8260B         |     | 1        | 132287 | 08/05/13 02:22 | CDC     | TAL BUF |
| Total/NA  | Analysis | 8021B         |     | 1        | 132895 | 08/08/13 11:34 | DGB     | TAL BUF |
| Total/NA  | Prep     | 200.7         |     |          | 132007 | 08/02/13 09:15 | NMD2    | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |     | 1        | 132207 | 08/02/13 18:10 | AMH     | TAL BUF |
| Total/NA  | Analysis | SM 4500 H+ B  |     | 1        | 131742 | 07/31/13 22:08 | KS      | TAL BUF |
| Total/NA  | Prep     | Distill/CN    |     |          | 131943 | 08/01/13 18:00 | JMB     | TAL BUF |
| Total/NA  | Analysis | 335.4         |     | 1        | 132128 | 08/02/13 13:03 | KMF     | TAL BUF |

**Laboratory References:** 

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TestAmerica Job ID: 480-42936-1

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

### Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority         | Program       | Certification ID | Expiration Date |            |  |
|-------------------|---------------|------------------|-----------------|------------|--|
| Arkansas DEQ      | State Program | 6                | 88-0686         | 07-06-13 * |  |
| California        | NELAP         | 9                | 1169CA          | 09-30-13   |  |
| Connecticut       | State Program | 1                | PH-0568         | 09-30-14   |  |
| Florida           | NELAP         | 4                | E87672          | 06-30-14   |  |
| Georgia           | State Program | 4                | N/A             | 03-31-14   |  |
| Georgia           | State Program | 4                | 956             | 03-31-14   |  |
| Ilinois           | NELAP         | 5                | 200003          | 09-30-13   |  |
| owa               | State Program | 7                | 374             | 03-15-15   |  |
| Kansas            | NELAP         | 7                | E-10187         | 01-31-14   |  |
| Kentucky          | State Program | 4                | 90029           | 12-31-13   |  |
| Kentucky (UST)    | State Program | 4                | 30              | 04-01-14   |  |
| _ouisiana         | NELAP         | 6                | 02031           | 06-30-14   |  |
| Maine             | State Program | 1                | NY00044         | 12-04-13   |  |
| Maryland          | State Program | 3                | 294             | 03-31-14   |  |
| Massachusetts     | State Program | 1                | M-NY044         | 06-30-14   |  |
| Michigan          | State Program | 5                | 9937            | 04-01-14   |  |
| Minnesota         | NELAP         | 5                | 036-999-337     | 12-31-13   |  |
| New Hampshire     | NELAP         | 1                | 2973            | 09-11-13   |  |
| New Hampshire     | NELAP         | 1                | 2337            | 11-17-13   |  |
| New Jersey        | NELAP         | 2                | NY455           | 06-30-14   |  |
| New York          | NELAP         | 2                | 10026           | 04-01-14   |  |
| North Dakota      | State Program | 8                | R-176           | 03-31-14   |  |
| Oklahoma          | State Program | 6                | 9421            | 08-31-13 * |  |
| Oregon            | NELAP         | 10               | NY200003        | 06-09-14   |  |
| Pennsylvania      | NELAP         | 3                | 68-00281        | 07-31-14   |  |
| Rhode Island      | State Program | 1                | LAO00328        | 12-31-13   |  |
| Tennessee         | State Program | 4                | TN02970         | 04-01-14   |  |
| Texas Texas       | NELAP         | 6                | T104704412-11-2 | 07-31-14   |  |
| JSDA              | Federal       |                  | P330-11-00386   | 11-22-14   |  |
| ∕irginia          | NELAP         | 3                | 460185          | 09-14-13   |  |
| Washington        | State Program | 10               | C784            | 02-10-14   |  |
| West Virginia DEP | State Program | 3                | 252             | 09-30-13   |  |
| Wisconsin         | State Program | 5                | 998310390       | 08-31-13 * |  |

<sup>\*</sup> Expired certification is currently pending renewal and is considered valid.

### **Method Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-42936-1

| Method        | Method Description                 | Protocol | Laboratory |
|---------------|------------------------------------|----------|------------|
| 8260B         | Volatile Organic Compounds (GC/MS) | SW846    | TAL BUF    |
| 8021B         | Volatile Organic Compounds (GC)    | SW846    | TAL BUF    |
| 200.7 Rev 4.4 | Metals (ICP)                       | EPA      | TAL BUF    |
| 300.0         | Anions, Ion Chromatography         | MCAWW    | TAL BUF    |
| 310.2         | Alkalinity                         | MCAWW    | TAL BUF    |
| 335.4         | Cyanide, Total                     | MCAWW    | TAL BUF    |
| SM 4500 H+ B  | pH                                 | SM       | TAL BUF    |

#### **Protocol References:**

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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### **Sample Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-42936-1

| Lab Sample ID | Client Sample ID | Matrix     | Collected      | Received       |
|---------------|------------------|------------|----------------|----------------|
| 480-42936-1   | Pre-Carbon       | Wastewater | 07/31/13 15:10 | 07/31/13 16:00 |
| 480-42937-1   | Post-Carbon      | Wastewater | 07/31/13 15:00 | 07/31/13 16:00 |

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| DOMOCI |
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|        |

SIZICE#

Cooler Temperature(s) °C and Other Remarks:

0

| 10 Hazelwood Drive  |                         |            | CI               | nain o                                | of C            | ust                            | tod                        | y R                 | ec (     | ord     |          |          |         |         |            |                  |              | 0317  | 11101                    | 100          |
|---|-------------------------|------------|------------------|---------------------------------------|-----------------|--------------------------------|----------------------------|---------------------|----------|---------|----------|----------|---------|---------|------------|------------------|--------------|---|--------------------------|--------------|
| Amherst, NY 14228-2298  |                         |            |                  |                                       |                 |                                |                            |                     |          |         |          |          |         |         |            |                  | 7            | HE LEADER IN E                                      | NVIRONMENT               | AL TESTING   |
| Phone (716) 691-2600 Fax (716) 691-7991                                 | 10                      | ,,         |                  | Lab F                                 | 18.4            |                                |                            |                     |          |         | IC:      | amier Tr | acking  | No(s    |            |                  | Icc          | C No:   |                          |              |
| Client Information Client Contact:                                      | Sampler.                | Vand       |                  | Fisc                                  | her, Br         | rian                           |                            |                     |          |         |          | anior in | acking  |         |            |                  | 0-30377-1176 | .1  |                          |              |
| Client Contact:<br>Thomas Palmer  | Phone:                  | C45 2      | 302              | E-Ma<br>briar                         |                 | er@te                          | estame                     | ericair             | nc.com   | 1       |          |          |         |         |            |                  |              | ge:<br>age 1 of 1                                   |                          |              |
| Company:  |                         |            |                  |                                       | П               |                                |                            |                     |          |         | D        | 4        |         |         |            |                  | Jol          | b#:   |                          |              |
| Groundwater & Environmental Services Inc                                | In                      | -4.        |                  |                                       |                 |                                | _                          | _                   | Ana      | lysis   | Requ     | estec    | 1       | _       |            | $\neg \neg$      | Dr           | eservation Co                                       | des                      |              |
| Address:<br>495 Aero Drive Suite 3                                      | Due Date Request        | ea:        |                  |                                       |                 |                                | 1 1                        |                     |          |         |          |          |         |         |            |                  |              | - HCL   | M - Hexane               |              |
| City:<br>Cheektowaga  | TAT Requested (d        | ays):      |                  |                                       |                 |                                |                            |                     |          |         |          |          |         |         |            |                  | В            | - NaOH  | N - None                 |              |
|   | 4                       |            |                  |                                       | 18              |                                |                            |                     |          |         |          |          |         |         |            |                  | D            | <ul> <li>Zn Acetate</li> <li>Nitric Acid</li> </ul> | O - AsNaO2<br>P - Na2O4S | 5            |
| State, Zip:<br>NY, 14225  |                         |            |                  |                                       |                 |                                |                            |                     |          |         |          |          |         |         |            |                  |              | - NaHSO4<br>- MeOH                                  | Q - Na2SO3<br>R - Na2S2S |              |
| Phone:  | PO #:<br>Purchase Order | not requir |                  |                                       |                 |                                |                            |                     |          |         |          |          | 1       |         |            |                  |              | - Amchlor<br>- Ascorbic Acid                        | S - H2SO4<br>T - TSP Do  | decahydrate  |
| Email:  | WO #:                   |            |                  |                                       | ž i             | ١,                             |                            |                     |          |         |          |          |         |         |            |                  |              | Ice<br>- DI Water                                   | U - Acetone<br>V - MCAA  |              |
| tpalmer@gesonline.com   | Project #:              |            |                  |                                       | 8 2             | etho                           | _                          |                     |          |         |          |          |         |         |            | 2                | K            | - EDTA  | W - ph 4-5               |              |
| Project Name:<br>NYSDEC - Gastown WWTP/Gastown Event Desc: Mthly Pre-Ca |                         |            |                  |                                       | 5               | i i                            | tho                        | _                   |          |         |          |          |         |         |            | igi              | -            | - EDA   | Z - other (sp            | pecity)      |
| Site:   | SSOW#:                  |            |                  |                                       |                 | 3 3                            | N N                        | Total               |          |         |          |          |         |         |            | 3                | 4            | her:  |                          |              |
| New York  |                         |            |                  | 78-38-30                              | P S             | MOD                            | 2                          | ulty,               |          |         |          |          |         | 1       |            | o Tec            |              |   |                          |              |
|   |                         |            | Sample           | Matrix                                | Itera           | 300.0_28D - (MOD) Local Method | 200.7 - (MOD) Local Method | 310.2 - Alkalinity, |          |         |          |          | 1       |         |            | E                |              |   |                          |              |
|   |                         | Sample     | Type<br>(C=comp, | (W=water,<br>S=solid,<br>O=waste/oil, |                 | 28                             | 1-6                        | 2-A                 |          |         |          | -1       | 1       |         | 1 1        | Total Num        | 2            |   |                          |              |
| Sample Identification   | Sample Date             | Time       | G=grab) B        |                                       |                 | 300                            | 200                        | 310                 |          |         |          |          |         |         | $\perp$    | P                | 0            | Special I   | nstructions              | Note:        |
|   |                         | > <        | Preservati       | on Code:                              | W               | N                              | D                          | N                   |          |         | 2.0      |          | -       | 200     | 100        | $\triangleright$ |              |   |                          | Table 1      |
| Pre-Carbon  | 7/3/13                  | 1510       | G                | Water                                 | NN              |                                | 1                          | 1                   |          |         |          |          |         |         |            |                  |              |   |                          |              |
|   | 1/5/15                  | 1310       | -                |                                       | <del>l'I'</del> | +                              |                            |                     | $\neg$   |         | $\vdash$ | $\top$   | 1       | T       | 11         |                  |              |   |                          |              |
|   |                         |            |                  |                                       | ₩               | +                              | +                          | Н                   | +        | -       | $\vdash$ | +        | +       | ╁       | ++         | +                |              |   |                          |              |
|   |                         |            |                  |                                       | Ш               | $\perp$                        |                            |                     |          |         | <u> </u> |          | _       | 1       | $\perp$    |                  |              |   |                          |              |
|   |                         |            |                  |                                       | П               |                                |                            |                     |          |         |          |          |         |         |            |                  |              |   |                          |              |
|   |                         |            |                  |                                       | T               | $\top$                         |                            |                     |          |         |          |          |         |         |            |                  |              |   |                          |              |
|   |                         |            |                  |                                       | ╁┼              | +                              | +                          | Н                   | -        |         |          | +        | +       |         | 1 1        | The second       |              |   |                          | <u> </u>     |
|   |                         |            |                  |                                       | ₩               | +                              | +                          |                     | -        | -       | $\vdash$ | +        | +       |         |            | AI <b>III</b> I) | WI           |   |                          |              |
|   |                         |            |                  |                                       | Ш               |                                |                            |                     |          |         |          |          | $\perp$ |         |            | ANNIN'           |              |   |                          |              |
|   |                         |            |                  |                                       | П               |                                |                            |                     |          |         |          |          |         |         | 1/11/11/1  | AN <b>III</b> I  |              |   |                          | i            |
|   | 1                       |            |                  |                                       | 11              | $^{+}$                         |                            | $\vdash$            |          |         | $\Box$   | $\top$   | +       |         | 190        | 1293             | 36 C         | hain of Cu  | stody                    |              |
|   |                         | -          | -                |                                       | ₩               | +                              | +                          |                     | $\vdash$ |         | $\vdash$ | +        | +       |         | 460-       | 1200             |              |   |                          |              |
|   |                         |            |                  |                                       | 11              |                                | _                          |                     | $\sqcup$ |         |          | $\perp$  | $\perp$ | $\perp$ | $\sqcup$   |                  |              |   |                          |              |
|   |                         |            |                  |                                       | Ш               |                                |                            |                     |          |         |          |          |         |         |            |                  |              |   |                          |              |
| Possible Hazard Identification  |                         |            |                  |                                       | s               | amp                            | le Dis                     | posal               | ( A fe   | e may   | be ass   | essed    | if sa   | mple    | s are r    | etaine           | ed Id        | onger than 1 i                                      | nonth)                   |              |
| Non-Hazard Flammable Skin Irritant Poisc                                | on B Unknow             | vn Ra      | diological       |                                       | $\perp$         | ш                              | Return                     | To C                | Client   |         | Disp     |          | By La   | b       |            | Archi            | ive F        | or  | _ Months                 |              |
| Deliverable Requested: I, II, III, IV, Other (specify)                  |                         |            |                  |                                       | S               | Specia                         | al Instr                   | uction              | ns/QC    | Require | ements   |          |         |         |            |                  |              |   |                          |              |
| Empty Kit Relinquished by:  |                         | Date:      |                  |                                       | Time            | e:                             |                            |                     | Λ.       |         | Л        | Me       | ethod o | of Ship | ment:      |                  |              |   |                          |              |
| Relinquished by:  | Date/Time:/             | 13 11      | 600              | Company                               | 0.              | Re                             | eceived                    | by:                 | 11/1     | M       | K        | oU       | 1/      | Dat     | e/Time:    | 71               | 31           | 113/60  | Company                  | 1            |
| Relinquished by:  | Date/Time:              | - /        |                  | Company                               |                 | Re                             | eceived                    | by:                 | V        | V C     | 0 (      |          | ///     | Dat     | e/Time:    | • 1              |              | 11-   | Company                  | <del> </del> |
|   |                         |            |                  | Company                               |                 | -                              | eceived                    | but                 |          |         |          |          |         | Do      | te/Time:   | _                |              |   | Company                  |              |
| Relinquished by:  | Date/Time:              |            | - 10             | company                               |                 | IKE                            | ceived                     | Dy.                 |          |         |          |          |         | Da      | of I HITO. |                  |              |   | Company                  |              |

Custody Seals Intact:
Δ Yes Δ No

Custody Seal No.:

Page 13 of 16

**Chain of Custody Record** Phone (716) 691-2600 Fax (716) 691-7991 **TestAmerica** Client Information Client Contact: THE LEADER IN ENVIRONMENTAL TESTIN Thomas Palmer Fischer, Brian Carrier Tracking No(s): E-Mail Groundwater & Environmental Services Inc 480-30386-1177.1 brian.fischer@testamericainc.com 495 Aero Drive Suite 3 Page 1 of 1 Due Date Requested: **Analysis Requested** Cheektowaga TAT Requested (days): State, Zip: Preservation Codes: NY, 14225 A-HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 Purchase Order not requir D - Nitric Acid P - Na204S E - NaHSO4 tpalmer@gesonline.com WO #: Q - Na2SO3 F - MeOH Project Name: R - Na2S2SO3 G - Amchlor NYSDEC - Gastown WWTP/Gastown Event Desc: Mthly Post-Ca S - H2SO4 8021B - (MOD) STARS List - VOA . H - Ascorbic Acid Project #: T - TSP Dodecahydrate 48002525 I - Ice U - Acetone New York J - DI Water SSOW#: V-MCAA containers K-EDTA W-ph 4-5 L-EDA Z - other (specify) 335.4 - Cyanide, Total Other: H. Matrix Sample 6 Type SM4500\_H+. Sample Identification Total Number Sample (C=comp, S=solid, Sample Date Time G=grab) BT=Tissue, A=Air Post-Carbon Preservation Code: Special Instructions/Note: Page 1500 G Water 4 으 Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poison B Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) Deliverable Requested: I, II, III, IV, Other (specify) Radiological Disposal By Lab Empty Kit Relinquished by: Special Instructions/QC Requirements: Months Relinquished by Date: Time: Date/Time: Method of Shipment: Company Relinquished by: Received by 1600 G65 bukon Company Relinquished by: Received by: Date/Time: Date/Time Company Custody Seals Intact: Received by: Custody Seal No.: Δ Yes Δ No Company Cooler Temperature(s) °C and Other Remarks: 5.2 ICE #

### Login Sample Receipt Checklist

Client: New York State D.E.C. Job Number: 480-42936-1

Login Number: 42936 List Source: TestAmerica Buffalo

List Number: 1 Creator: Kolb, Chris M

| Answer | Comment                                 |
|--------|---|
| True   |   |
| True   |   |
| True   |   |
| True   |   |
| True   |   |
| True   |   |
| True   |   |
| True   |   |
| True   |   |
| True   |   |
| True   |   |
| True   |   |
| True   |   |
| True   |   |
| True   |   |
| True   |   |
| True   |   |
| True   |   |
| True   |   |
| N/A    |   |
| True   |   |
| True   |   |
| True   |   |
| N/A    |   |
| True   |   |
| True   |   |
| N/A    |   |
|        | True True True True True True True True |

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### **Login Sample Receipt Checklist**

Client: New York State D.E.C. Job Number: 480-42936-1

Login Number: 42937 List Source: TestAmerica Buffalo

List Number: 1 Creator: Kolb, Chris M

| Creator. Roll, Cliris W  |        |         |
|--|--------|---------|
| Question   | Answer | Comment |
| Radioactivity either was not measured or, if measured, is at or below background | True   |         |
| The cooler's custody seal, if present, is intact.                                | True   |         |
| The cooler or samples do not appear to have been compromised or ampered with.    | True   |         |
| Samples were received on ice.  | True   |         |
| Cooler Temperature is acceptable.  | True   |         |
| Cooler Temperature is recorded.  | True   |         |
| COC is present.  | True   |         |
| COC is filled out in ink and legible.  | True   |         |
| COC is filled out with all pertinent information.                                | True   |         |
| s the Field Sampler's name present on COC?                                       | True   |         |
| There are no discrepancies between the sample IDs on the containers and he COC.  | True   |         |
| Samples are received within Holding Time.  | True   |         |
| Sample containers have legible labels.   | True   |         |
| Containers are not broken or leaking.  | True   |         |
| Sample collection date/times are provided.                                       | True   |         |
| Appropriate sample containers are used.  | True   |         |
| Sample bottles are completely filled.  | True   |         |
| Sample Preservation Verified   | True   |         |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |         |
| /OA sample vials do not have headspace or bubble is <6mm (1/4") in liameter.     | True   |         |
| necessary, staff have been informed of any short hold time or quick TAT eeds     | True   |         |
| flultiphasic samples are not present.  | True   |         |
| samples do not require splitting or compositing.                                 | True   |         |
| Sampling Company provided.   | N/A    |         |
| Samples received within 48 hours of sampling.                                    | True   |         |
| Samples requiring field filtration have been filtered in the field.              | True   |         |
| Chlorine Residual checked.   | N/A    |         |
|  |        |         |

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THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo 10 Hazelwood Drive Amherst, NY 14228-2298 Tel: (716)691-2600

TestAmerica Job ID: 480-44744-1

Client Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Sampling Event: Qtrly Post-Carbon Qtrly Pre-Carbon

#### For:

New York State D.E.C. 270 Michigan Avenue Buffalo, New York 14203

Attn: Mr. Glenn May

Authorized for release by: 9/6/2013 2:40:02 PM

Brian Fischer, Project Manager II brian.fischer@testamericainc.com



Review your project results through

Total Access

**Have a Question?** 



Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Loostifu that this data package is in some

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

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Brian Fischer Project Manager II 9/6/2013 2:40:02 PM 9

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TestAmerica Job ID: 480-44744-1

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

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### **Definitions/Glossary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

**Qualifier Description** 

TestAmerica Job ID: 480-44744-1

#### **Qualifiers**

#### GC/MS Semi VOA

| X | Surrogate is outside control limits  |
|---|--|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| В | Compound was found in the blank and sample.  |

#### **GC VOA**

Qualifier

| Qualifier | Qualifier Description  |
|-----------|--|
| J         | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

#### **Metals**

| Qualifier | Qualifier Description  |
|-----------|--|
| B7        | Target analyte detected in method blank at or above method reporting limit. Concentration found in the sample was 10 times above the |
|           | concentration found in the blank.  |
| В         | Compound was found in the blank and sample.  |
| J         | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.                       |

### **General Chemistry**

| Qualifier | Qualifier Description                             |
|-----------|---|
| HF        | Field parameter with a holding time of 15 minutes |

### **Glossary**

| Abbreviation   | These commonly used abbreviations may or may not be present in this report.                                 |
|----------------|---|
| ¤              | Listed under the "D" column to designate that the result is reported on a dry weight basis                  |
| %R             | Percent Recovery  |
| CNF            | Contains no Free Liquid   |
| DER            | Duplicate error ratio (normalized absolute difference)  |
| Dil Fac        | Dilution Factor   |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC            | Decision level concentration  |
| MDA            | Minimum detectable activity   |
| EDL            | Estimated Detection Limit   |
| MDC            | Minimum detectable concentration  |
| MDL            | Method Detection Limit  |
| ML             | Minimum Level (Dioxin)  |
| NC             | Not Calculated  |
| ND             | Not detected at the reporting limit (or MDL or EDL if shown)  |
| PQL            | Practical Quantitation Limit  |
| QC             | Quality Control   |
| RER            | Relative error ratio  |
| RL             | Reporting Limit or Requested Limit (Radiochemistry)   |
| RPD            | Relative Percent Difference, a measure of the relative difference between two points                        |
| TEF            | Toxicity Equivalent Factor (Dioxin)   |
| TEQ            | Toxicity Equivalent Quotient (Dioxin)   |

#### **Case Narrative**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-44744-1

Job ID: 480-44744-1

**Laboratory: TestAmerica Buffalo** 

Narrative

Job Narrative 480-44744-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 8/28/2013 1:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 3.2° C, 3.2° C, 3.5° C and 3.5° C.

#### Except:

Sample coc listed test methods, however, individual methods were not checked off for the sample point. Methods present in the project and on the id labels were used to select methods for the login.

#### GC/MS VOA

Method(s) 8260B: The following samples were diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-44744-2). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

#### GC/MS Semi VOA

Method(s) 8270C: Surrogate recovery for the following sample was outside control limits: Post-Carbon (480-44745-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8270C: The method blank for batch 136603 contained multiple anlaytes above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No other analytical or quality issues were noted.

#### Ion Chromatograhy

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-44744-2). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

#### GC VOA

Method(s) 8021B: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-44744-2). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

#### GC Semi VOA

No analytical or quality issues were noted.

#### Metals

Method(s) 200.7 Rev 4.4: The Method Blank for batch 480-136762 contained total zinc above the method detection limit. This target analyte concentration was less than the 2.2 times the method detection limit; therefore, re-extraction and/or re-analysis of sample Post-Carbon (480-44745-1) was not performed.

No other analytical or quality issues were noted.

#### **General Chemistry**

Method(s) 420.4, 9066: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 137156 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria. (480-44745-1 MS)

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#### **Case Narrative**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-44744-1

Job ID: 480-44744-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

Method(s) SM 5210B: The USB dilution water D.O. depletion was greater than 0.2 mg/L but less than the reporting limit of 2.0 mg/L. The associated sample results are reported.

Method(s) SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample(s) has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Post-Carbon (480-44745-1)

No other analytical or quality issues were noted.

**Organic Prep** 

No analytical or quality issues were noted.

---- lab ID: 400 44744 4

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Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Client Sample ID: Pre-Carbon

Date Collected: 08/28/13 12:45 Date Received: 08/28/13 13:15 Lab Sample ID: 480-44744-2

Matrix: Wastewater

| Analyte                     | Result Qu | alifier RL | MDL | Unit | D | Prepared | Analyzed       | Dil Fa |
|-----------------------------|-----------|------------|-----|------|---|----------|----------------|--------|
| 1,1,1-Trichloroethane       | ND ND     | 50         | 41  | ug/L |   |          | 09/05/13 13:24 | 50     |
| 1,1,2,2-Tetrachloroethane   | ND        | 50         | 11  | ug/L |   |          | 09/05/13 13:24 | 50     |
| 1,1,2-Trichloroethane       | ND        | 50         | 12  | ug/L |   |          | 09/05/13 13:24 | 50     |
| 1,1-Dichloroethane          | ND        | 50         | 19  | ug/L |   |          | 09/05/13 13:24 | 50     |
| 1,1-Dichloroethene          | ND        | 50         | 15  | ug/L |   |          | 09/05/13 13:24 | 50     |
| 1,2-Dichloroethane          | ND        | 50         | 11  | ug/L |   |          | 09/05/13 13:24 | 50     |
| 1,2-Dichloroethene, Total   | ND        | 100        | 35  | ug/L |   |          | 09/05/13 13:24 | 50     |
| 1,2-Dichloropropane         | ND        | 50         | 36  | ug/L |   |          | 09/05/13 13:24 | 50     |
| 2-Hexanone                  | ND        | 250        | 62  | ug/L |   |          | 09/05/13 13:24 | 50     |
| 2-Butanone (MEK)            | ND        | 500        | 66  | ug/L |   |          | 09/05/13 13:24 | 50     |
| 4-Methyl-2-pentanone (MIBK) | ND        | 250        | 110 | ug/L |   |          | 09/05/13 13:24 | 50     |
| Acetone                     | ND        | 500        | 150 | ug/L |   |          | 09/05/13 13:24 | 50     |
| Benzene                     | 3100      | 50         | 21  | ug/L |   |          | 09/05/13 13:24 | 50     |
| Bromodichloromethane        | ND        | 50         | 20  | ug/L |   |          | 09/05/13 13:24 | 50     |
| Bromoform                   | ND        | 50         | 13  | ug/L |   |          | 09/05/13 13:24 | 50     |
| Bromomethane                | ND        | 50         | 35  | ug/L |   |          | 09/05/13 13:24 | 50     |
| Carbon disulfide            | ND        | 50         | 9.5 | ug/L |   |          | 09/05/13 13:24 | 50     |
| Carbon tetrachloride        | ND        | 50         | 14  | ug/L |   |          | 09/05/13 13:24 | 50     |
| Chlorobenzene               | ND        | 50         | 38  | ug/L |   |          | 09/05/13 13:24 | 50     |
| Dibromochloromethane        | ND        | 50         | 16  | ug/L |   |          | 09/05/13 13:24 | 50     |
| Chloroethane                | ND        | 50         | 16  | ug/L |   |          | 09/05/13 13:24 | 50     |
| Chloroform                  | ND        | 50         | 17  | ug/L |   |          | 09/05/13 13:24 | 50     |
| Chloromethane               | ND        | 50         | 18  | ug/L |   |          | 09/05/13 13:24 | 50     |
| cis-1,3-Dichloropropene     | ND        | 50         | 18  | ug/L |   |          | 09/05/13 13:24 | 50     |
| Ethylbenzene                | 530       | 50         | 37  | ug/L |   |          | 09/05/13 13:24 | 50     |
| Methylene Chloride          | ND        | 50         | 22  | ug/L |   |          | 09/05/13 13:24 | 50     |
| Styrene                     | ND        | 50         | 37  | ug/L |   |          | 09/05/13 13:24 | 50     |
| Tetrachloroethene           | ND        | 50         | 18  | ug/L |   |          | 09/05/13 13:24 | 50     |
| Toluene                     | 1400      | 50         | 26  | ug/L |   |          | 09/05/13 13:24 | 50     |
| trans-1,3-Dichloropropene   | ND        | 50         | 19  | ug/L |   |          | 09/05/13 13:24 | 50     |
| Trichloroethene             | ND        | 50         | 23  | ug/L |   |          | 09/05/13 13:24 | 50     |
| Vinyl chloride              | ND        | 50         | 45  | ug/L |   |          | 09/05/13 13:24 | 50     |
| Vinyl acetate               | ND        | 250        | 43  | ug/L |   |          | 09/05/13 13:24 | 50     |
| Xylenes, Total              | 170       | 100        | 33  | ug/L |   |          | 09/05/13 13:24 | 50     |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 100       |           | 66 - 137 |          | 09/05/13 13:24 | 50      |
| Toluene-d8 (Surr)            | 112       |           | 71 - 126 |          | 09/05/13 13:24 | 50      |
| 4-Bromofluorobenzene (Surr)  | 109       |           | 73 - 120 |          | 09/05/13 13:24 | 50      |

| Method: 8021B - Volatile Organic | c Compounds (GC) |
|----------------------------------|------------------|
|----------------------------------|------------------|

| moundar cozinz          |        | (00)      |      |       |      |   |          |                |         |
|-------------------------|--------|-----------|------|-------|------|---|----------|----------------|---------|
| Analyte F               | Result | Qualifier | RL   | MDL   | Unit | D | Prepared | Analyzed       | Dil Fac |
| 1,2,4-Trimethylbenzene  | ND     |           | 0.20 | 0.035 | ug/L |   |          | 09/04/13 12:04 | 1       |
| 1,3,5-Trimethylbenzene  | ND     |           | 0.20 | 0.15  | ug/L |   |          | 09/04/13 12:04 | 1       |
| Isopropylbenzene        | 3.4    |           | 0.20 | 0.027 | ug/L |   |          | 09/04/13 12:04 | 1       |
| Methyl tert-butyl ether | ND     |           | 0.40 | 0.044 | ug/L |   |          | 09/04/13 12:04 | 1       |
| m,p-Xylene              | 58     |           | 0.40 | 0.054 | ug/L |   |          | 09/04/13 12:04 | 1       |
| n-Butylbenzene          | ND     |           | 0.20 | 0.031 | ug/L |   |          | 09/04/13 12:04 | 1       |
| n-Propylbenzene         | ND     |           | 0.20 | 0.13  | ug/L |   |          | 09/04/13 12:04 | 1       |
| p-Cymene                | ND     |           | 0.20 | 0.030 | ug/L |   |          | 09/04/13 12:04 | 1       |
|                         |        |           |      |       |      |   |          |                |         |

TestAmerica Buffalo

### **Client Sample Results**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Lab Sample ID: 480-44744-2

TestAmerica Job ID: 480-44744-1

**Client Sample ID: Pre-Carbon** Date Collected: 08/28/13 12:45

Date Received: 08/28/13 13:15

**Matrix: Wastewater** 

| Analyte                           | Result    | Qualifier | RL       | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
|-----------------------------------|-----------|-----------|----------|-------|------|---|----------------|----------------|---------|
| sec-Butylbenzene                  | ND        |           | 0.20     | 0.020 | ug/L |   |                | 09/04/13 12:04 | 1       |
| Toluene                           | ND        |           | 0.20     | 0.036 | ug/L |   |                | 09/04/13 12:04 | 1       |
| Xylenes, Total                    | 140       |           | 0.60     | 0.054 | ug/L |   |                | 09/04/13 12:04 | 1       |
| Surrogate                         | %Recovery | Qualifier | Limits   |       |      |   | Prepared       | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene            | 97        |           | 63 - 145 |       |      |   |                | 09/04/13 12:04 | 1       |
| 4-Bromofluorobenzene              | 100       |           | 64 - 141 |       |      |   |                | 09/04/13 12:04 | 1       |
| Method: 8021B - Volatile Organic  | Compounds | (GC) - DL |          |       |      |   |                |                |         |
| Analyte                           | Result    | Qualifier | RL       | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Benzene                           | 3200      |           | 20       | 2.3   | ug/L |   |                | 09/04/13 12:50 | 100     |
| Ethylbenzene                      | 560       |           | 20       | 2.9   | ug/L |   |                | 09/04/13 12:50 | 100     |
| o-Xylene                          | 96        |           | 20       | 2.7   | ug/L |   |                | 09/04/13 12:50 | 100     |
| Surrogate                         | %Recovery | Qualifier | Limits   |       |      |   | Prepared       | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene            | 100       |           | 63 - 145 |       |      |   |                | 09/04/13 12:50 | 100     |
| 4-Bromofluorobenzene              | 100       |           | 64 - 141 |       |      |   |                | 09/04/13 12:50 | 100     |
| Method: 200.7 Rev 4.4 - Metals (I | CP)       |           |          |       |      |   |                |                |         |
| Analyte                           | Result    | Qualifier | RL _     | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Calcium                           | 33400     | B7        | 500      | 100   | ug/L |   | 08/30/13 10:50 | 08/30/13 19:05 | 1       |
| Iron                              | 120       |           | 50.0     | 19.3  | ug/L |   | 08/30/13 10:50 | 08/30/13 19:05 | 1       |
| Magnesium                         | 8900      |           | 200      | 43.4  | ug/L |   | 08/30/13 10:50 | 08/30/13 19:05 | 1       |
| Potassium                         | 1820      |           | 500      | 100   | ug/L |   | 08/30/13 10:50 | 08/30/13 19:05 | 1       |
| Sodium                            | 12100     |           | 1000     | 324   | ug/L |   | 08/30/13 10:50 | 08/30/13 19:05 | 1       |
| General Chemistry                 |           |           |          |       |      |   |                |                |         |
| Analyte                           | Result    | Qualifier | RL       | MDL   |      | D | Prepared       | Analyzed       | Dil Fac |
| Chloride                          | 82.8      |           | 0.50     | 0.28  | mg/L |   |                | 08/30/13 05:18 | 1       |
| Sulfate                           | 112       |           | 10.0     | 1.7   | mg/L |   |                | 08/30/13 15:22 | 5       |
| Alkalinity, Total                 | 446       |           | 50.0     | 20.0  | mg/L |   |                | 09/03/13 17:07 | 5       |

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

**Client Sample ID: Post-Carbon** 

Date Collected: 08/28/13 12:30 Date Received: 08/28/13 13:15 Lab Sample ID: 480-44745-1

Matrix: Wastewater

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| 1,1,1-Trichloroethane       | ND     |           | 1.0 | 0.82 | ug/L |   |          | 09/05/13 14:18 | 1       |
| 1,1,2,2-Tetrachloroethane   | ND     |           | 1.0 | 0.21 | ug/L |   |          | 09/05/13 14:18 | 1       |
| 1,1,2-Trichloroethane       | ND     |           | 1.0 | 0.23 | ug/L |   |          | 09/05/13 14:18 | 1       |
| 1,1-Dichloroethane          | ND     |           | 1.0 | 0.38 | ug/L |   |          | 09/05/13 14:18 | 1       |
| 1,1-Dichloroethene          | ND     |           | 1.0 | 0.29 | ug/L |   |          | 09/05/13 14:18 | 1       |
| 1,2-Dichloroethane          | ND     |           | 1.0 | 0.21 | ug/L |   |          | 09/05/13 14:18 | 1       |
| 1,2-Dichloroethene, Total   | ND     |           | 2.0 | 0.70 | ug/L |   |          | 09/05/13 14:18 | 1       |
| 1,2-Dichloropropane         | ND     |           | 1.0 | 0.72 | ug/L |   |          | 09/05/13 14:18 | 1       |
| 2-Hexanone                  | ND     |           | 5.0 | 1.2  | ug/L |   |          | 09/05/13 14:18 | 1       |
| 2-Butanone (MEK)            | ND     |           | 10  | 1.3  | ug/L |   |          | 09/05/13 14:18 | 1       |
| 4-Methyl-2-pentanone (MIBK) | ND     |           | 5.0 | 2.1  | ug/L |   |          | 09/05/13 14:18 | 1       |
| Acetone                     | ND     |           | 10  | 3.0  | ug/L |   |          | 09/05/13 14:18 | 1       |
| Benzene                     | 3.3    |           | 1.0 | 0.41 | ug/L |   |          | 09/05/13 14:18 | 1       |
| Bromodichloromethane        | ND     |           | 1.0 | 0.39 | ug/L |   |          | 09/05/13 14:18 | 1       |
| Bromoform                   | ND     |           | 1.0 | 0.26 | ug/L |   |          | 09/05/13 14:18 | 1       |
| Bromomethane                | ND     |           | 1.0 | 0.69 | ug/L |   |          | 09/05/13 14:18 | 1       |
| Carbon disulfide            | ND     |           | 1.0 | 0.19 | ug/L |   |          | 09/05/13 14:18 | 1       |
| Carbon tetrachloride        | ND     |           | 1.0 | 0.27 | ug/L |   |          | 09/05/13 14:18 | 1       |
| Chlorobenzene               | ND     |           | 1.0 | 0.75 | ug/L |   |          | 09/05/13 14:18 | 1       |
| Dibromochloromethane        | ND     |           | 1.0 | 0.32 | ug/L |   |          | 09/05/13 14:18 | 1       |
| Chloroethane                | ND     |           | 1.0 | 0.32 | ug/L |   |          | 09/05/13 14:18 | 1       |
| Chloroform                  | 1.2    |           | 1.0 | 0.34 | ug/L |   |          | 09/05/13 14:18 | 1       |
| Chloromethane               | ND     |           | 1.0 | 0.35 | ug/L |   |          | 09/05/13 14:18 | 1       |
| cis-1,3-Dichloropropene     | ND     |           | 1.0 | 0.36 | ug/L |   |          | 09/05/13 14:18 | 1       |
| Ethylbenzene                | ND     |           | 1.0 | 0.74 | ug/L |   |          | 09/05/13 14:18 | 1       |
| Methylene Chloride          | ND     |           | 1.0 | 0.44 | ug/L |   |          | 09/05/13 14:18 | 1       |
| Styrene                     | ND     |           | 1.0 | 0.73 | ug/L |   |          | 09/05/13 14:18 | 1       |
| Tetrachloroethene           | ND     |           | 1.0 | 0.36 | ug/L |   |          | 09/05/13 14:18 | 1       |
| Toluene                     | ND     |           | 1.0 | 0.51 | ug/L |   |          | 09/05/13 14:18 | 1       |
| trans-1,3-Dichloropropene   | ND     |           | 1.0 | 0.37 | ug/L |   |          | 09/05/13 14:18 | 1       |
| Trichloroethene             | ND     |           | 1.0 | 0.46 | ug/L |   |          | 09/05/13 14:18 | 1       |
| Vinyl chloride              | ND     |           | 1.0 | 0.90 | ug/L |   |          | 09/05/13 14:18 | 1       |
| Vinyl acetate               | ND     |           | 5.0 |      | ug/L |   |          | 09/05/13 14:18 | 1       |
| Xylenes, Total              | ND     |           | 2.0 | 0.66 | ug/L |   |          | 09/05/13 14:18 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepa | ared | Analyzed       | Dil Fac |  |
|------------------------------|-----------|-----------|----------|-------|------|----------------|---------|--|
| 1,2-Dichloroethane-d4 (Surr) | 90        |           | 66 - 137 |       |      | 09/05/13 14:18 | 1       |  |
| Toluene-d8 (Surr)            | 97        |           | 71 - 126 |       |      | 09/05/13 14:18 | 1       |  |
| 4-Bromofluorobenzene (Surr)  | 93        |           | 73 - 120 |       |      | 09/05/13 14:18 | 1       |  |

| Method: 8270C - Semivolatile | e Organic Compoun | ds (GC/MS) |
|------------------------------|-------------------|------------|
|------------------------------|-------------------|------------|

| Analyte              | Result Qualifier | RL  | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
|----------------------|------------------|-----|------|------|---|----------------|----------------|---------|
| 2-Methylnaphthalene  | ND ND            | 5.0 | 0.60 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Acenaphthene         | ND               | 5.0 | 0.41 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Acenaphthylene       | ND               | 5.0 | 0.38 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Anthracene           | ND               | 5.0 | 0.28 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Benzo[a]anthracene   | ND               | 5.0 | 0.36 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Benzo[a]pyrene       | ND               | 5.0 | 0.47 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Benzo[b]fluoranthene | ND               | 5.0 | 0.34 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Benzo[g,h,i]perylene | ND               | 5.0 | 0.35 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |

TestAmerica Buffalo

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

**Client Sample ID: Post-Carbon** 

Date Collected: 08/28/13 12:30 Date Received: 08/28/13 13:15 Lab Sample ID: 480-44745-1

Matrix: Wastewater

| Method: 8270C - Semivolatile | e Organic Compou | nds (GC/M | S) (Continued) |      |      |   |                |                |         |
|------------------------------|------------------|-----------|----------------|------|------|---|----------------|----------------|---------|
| Analyte                      | Result           | Qualifier | RL             | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Benzo[k]fluoranthene         | ND               |           | 5.0            | 0.73 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Biphenyl                     | ND               |           | 5.0            | 0.66 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Bis(2-ethylhexyl) phthalate  | ND               |           | 5.0            | 1.8  | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Carbazole                    | ND               |           | 5.0            | 0.30 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Chrysene                     | ND               |           | 5.0            | 0.33 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Dibenz(a,h)anthracene        | ND               |           | 5.0            | 0.42 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Dibenzofuran                 | ND               |           | 10             | 0.51 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Fluoranthene                 | 0.54             | J         | 5.0            | 0.40 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Fluorene                     | ND               |           | 5.0            | 0.36 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Indeno[1,2,3-cd]pyrene       | ND               |           | 5.0            | 0.47 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Naphthalene                  | 1.0              | J         | 5.0            | 0.76 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Pentachlorophenol            | ND               |           | 10             | 2.2  | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Phenanthrene                 | 1.3              | JB        | 5.0            | 0.44 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Phenol                       | ND               |           | 5.0            | 0.39 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Pyrene                       | 0.66             | JB        | 5.0            | 0.34 | ug/L |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
| Surrogate                    | %Recovery        | Qualifier | Limits         |      |      |   | Prepared       | Analyzed       | Dil Fac |
| 2,4,6-Tribromophenol         | 75               |           | 52 - 132       |      |      |   | 08/29/13 14:50 | 08/31/13 08:55 | 1       |
|                              |                  |           |                |      |      |   |                |                |         |

| Surrogate            | %Recovery | Qualifier | Limits   | Prepared And          | alyzed Dil Fac |
|----------------------|-----------|-----------|----------|-----------------------|----------------|
| 2,4,6-Tribromophenol | 75        |           | 52 - 132 | 08/29/13 14:50 08/31/ | /13 08:55 1    |
| 2-Fluorobiphenyl     | 42        | Χ         | 48 - 120 | 08/29/13 14:50 08/31/ | /13 08:55 1    |
| 2-Fluorophenol       | 22        |           | 20 - 120 | 08/29/13 14:50 08/31/ | /13 08:55 1    |
| Nitrobenzene-d5      | 42        | X         | 46 - 120 | 08/29/13 14:50 08/31/ | /13 08:55 1    |
| p-Terphenyl-d14      | 64        | Χ         | 67 - 150 | 08/29/13 14:50 08/31/ | /13 08:55 1    |
| Phenol-d5            | 17        |           | 16 - 120 | 08/29/13 14:50 08/31/ | /13 08:55 1    |

| Analyte                 | Result | Qualifier | RL   | MDL   | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------|--------|-----------|------|-------|------|---|----------|----------------|---------|
| 1,2,4-Trimethylbenzene  | ND     |           | 0.20 | 0.035 | ug/L |   |          | 09/04/13 13:34 | 1       |
| 1,3,5-Trimethylbenzene  | ND     |           | 0.20 | 0.15  | ug/L |   |          | 09/04/13 13:34 | 1       |
| Benzene                 | 3.6    |           | 0.20 | 0.023 | ug/L |   |          | 09/04/13 13:34 | 1       |
| Ethylbenzene            | 0.19   | J         | 0.20 | 0.029 | ug/L |   |          | 09/04/13 13:34 | 1       |
| Isopropylbenzene        | ND     |           | 0.20 | 0.027 | ug/L |   |          | 09/04/13 13:34 | 1       |
| Methyl tert-butyl ether | ND     |           | 0.40 | 0.044 | ug/L |   |          | 09/04/13 13:34 | 1       |
| m,p-Xylene              | ND     |           | 0.40 | 0.054 | ug/L |   |          | 09/04/13 13:34 | 1       |
| n-Butylbenzene          | ND     |           | 0.20 | 0.031 | ug/L |   |          | 09/04/13 13:34 | 1       |
| n-Propylbenzene         | ND     |           | 0.20 | 0.13  | ug/L |   |          | 09/04/13 13:34 | 1       |
| o-Xylene                | ND     |           | 0.20 | 0.027 | ug/L |   |          | 09/04/13 13:34 | 1       |
| p-Cymene                | ND     |           | 0.20 | 0.030 | ug/L |   |          | 09/04/13 13:34 | 1       |
| sec-Butylbenzene        | ND     |           | 0.20 | 0.020 | ug/L |   |          | 09/04/13 13:34 | 1       |
| Toluene                 | 0.26   |           | 0.20 | 0.036 | ug/L |   |          | 09/04/13 13:34 | 1       |
| Xylenes, Total          | ND     |           | 0.60 | 0.054 | ua/L |   |          | 09/04/13 13:34 | 1       |

| Surrogate              | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------|-----------|-----------|----------|----------|----------------|---------|
| a,a,a-Trifluorotoluene | 101       |           | 63 - 145 |          | 09/04/13 13:34 | 1       |
| 4-Bromofluorobenzene   | 101       |           | 64 - 141 |          | 09/04/13 13:34 | 1       |

| Method: 608 - Organochlorii | d: 608 - Organochlorine Pesticides in Water |           |       |        |      |   |                |                |         |
|-----------------------------|---|-----------|-------|--------|------|---|----------------|----------------|---------|
| Analyte                     | Result                                      | Qualifier | RL    | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Aldrin                      | ND  |           | 0.050 | 0.0066 | ug/L |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |
| alpha-BHC                   | ND  |           | 0.050 | 0.0066 | ug/L |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |
| beta-BHC                    | ND  |           | 0.050 | 0.025  | ug/L |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |

TestAmerica Buffalo

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Lab Sample ID: 480-44745-1

TestAmerica Job ID: 480-44744-1

**Matrix: Wastewater** 

# **Client Sample ID: Post-Carbon**

Date Collected: 08/28/13 12:30 Date Received: 08/28/13 13:15

| Analyte                           | Result    | Qualifier | RL       | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
|-----------------------------------|-----------|-----------|----------|--------|------|---|----------------|----------------|---------|
| delta-BHC                         | ND        |           | 0.050    | 0.010  | ug/L |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |
| gamma-BHC (Lindane)               | ND        |           | 0.050    | 0.0060 | ug/L |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |
| Chlordane (technical)             | ND        |           | 0.50     | 0.29   | ug/L |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |
| 4,4'-DDD                          | ND        |           | 0.050    | 0.0092 | ug/L |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |
| 4,4'-DDE                          | ND        |           | 0.050    | 0.012  | ug/L |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |
| 4,4'-DDT                          | ND        |           | 0.050    | 0.011  | ug/L |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |
| Dieldrin                          | ND        |           | 0.050    | 0.0098 | ug/L |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |
| Endosulfan I                      | ND        |           | 0.050    | 0.011  | ug/L |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |
| Endosulfan II                     | ND        |           | 0.050    | 0.012  | ug/L |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |
| Endosulfan sulfate                | ND        |           | 0.050    | 0.016  | ug/L |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |
| Endrin                            | ND        |           | 0.050    | 0.014  | ug/L |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |
| Endrin aldehyde                   | ND        |           | 0.050    | 0.016  | ug/L |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |
| Heptachlor                        | ND        |           | 0.050    | 0.0085 | ug/L |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |
| Heptachlor epoxide                | ND        |           | 0.050    | 0.0053 | ug/L |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |
| Toxaphene                         | ND        |           | 0.50     | 0.12   | ug/L |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |
| Surrogate                         | %Recovery | Qualifier | Limits   |        |      |   | Prepared       | Analyzed       | Dil Fac |
| DCB Decachlorobiphenyl            | 77        | -         | 23 - 120 |        |      |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |
| Tetrachloro-m-xylene              | 78        |           | 36 - 120 |        |      |   | 08/29/13 14:46 | 08/30/13 12:24 | 1       |
| -<br>Method: 200.7 Rev 4.4 - Meta | als (ICP) |           |          |        |      |   |                |                |         |
| Analyte                           | Result    | Qualifier | RL       | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Arsenic                           | ND        |           | 10.0     | 5.6    | ug/L |   | 08/30/13 10:50 | 08/30/13 18:35 | 1       |
| Iron                              | 106       |           | 50.0     | 19.3   | ug/L |   | 08/30/13 10:50 | 08/30/13 18:35 | 1       |
| Manganese                         | 144       |           | 3.0      | 0.40   | ug/L |   | 08/30/13 10:50 | 08/30/13 18:35 | 1       |
| Zinc                              | 2.8       | JB        | 10.0     | 1.5    | ug/L |   | 08/30/13 10:50 | 08/30/13 18:35 | 1       |

| General Chemistry             |        |           |       |        |      |   |                |                |         |
|-------------------------------|--------|-----------|-------|--------|------|---|----------------|----------------|---------|
| Analyte                       | Result | Qualifier | RL    | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Oil & Grease                  | ND     |           | 5.0   | 1.4    | mg/L |   | 09/04/13 01:21 | 09/04/13 01:21 | 1       |
| Cyanide, Total                | 0.23   |           | 0.010 | 0.0050 | mg/L |   | 09/03/13 17:21 | 09/03/13 20:38 | 1       |
| Phenolics, Total Recoverable  | ND     |           | 0.010 | 0.0050 | mg/L |   | 08/30/13 08:00 | 09/04/13 04:05 | 1       |
| <b>Total Dissolved Solids</b> | 721    |           | 10.0  | 4.0    | mg/L |   |                | 08/29/13 18:58 | 1       |
| Biochemical Oxygen Demand     | ND     |           | 2.0   | 2.0    | mg/L |   |                | 08/28/13 20:50 | 1       |
| Analyte                       | Result | Qualifier | RL    | RL     | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Total Suspended Solids        | ND     |           | 4.0   | 4.0    | mg/L |   |                | 08/28/13 17:53 | 1       |
| pH                            | 7.86   | HE        | 0.100 | 0.100  | SU   |   |                | 08/29/13 19:22 | 1       |

### **Lab Chronicle**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-44744-1

Lab Sample ID: 480-44744-2

Matrix: Wastewater

Client Sample ID: Pre-Carbon

Date Collected: 08/28/13 12:45 Date Received: 08/28/13 13:15

|           | Batch    | Batch         |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|---------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method        | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8260B         |     | 50       | 137432 | 09/05/13 13:24 | RAL     | TAL BUF |
| Total/NA  | Analysis | 8021B         |     | 1        | 137042 | 09/04/13 12:04 | DGB     | TAL BUF |
| Total/NA  | Analysis | 8021B         | DL  | 100      | 137042 | 09/04/13 12:50 | DGB     | TAL BUF |
| Total/NA  | Prep     | 200.7         |     |          | 136762 | 08/30/13 10:50 | NMD2    | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |     | 1        | 137020 | 08/30/13 19:05 | AMH     | TAL BUF |
| Total/NA  | Analysis | 300.0         |     | 1        | 136548 | 08/30/13 05:18 | KRC     | TAL BUF |
| Total/NA  | Analysis | 300.0         |     | 5        | 136783 | 08/30/13 15:22 | KRC     | TAL BUF |
| Total/NA  | Analysis | 310.2         |     | 5        | 137135 | 09/03/13 17:07 | NCH     | TAL BUF |

**Client Sample ID: Post-Carbon** 

Date Collected: 08/28/13 12:30 Date Received: 08/28/13 13:15 Lab Sample ID: 480-44745-1 Matrix: Wastewater

Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number or Analyzed Analyst Lab Total/NA 8260B CDC TAL BUF Analysis 137408 09/05/13 14:18 Total/NA Prep 3510C 136603 08/29/13 14:50 **TRG** TAL BUF Total/NA 8270C 136861 08/31/13 08:55 RMM TAL BUF Analysis 1 Total/NA Analysis 8021B 137042 09/04/13 13:34 DGB TAL BUF Total/NA 3510C 136598 08/29/13 14:46 TRG TAL BUF Prep Total/NA 608 136728 08/30/13 12:24 LMW TAL BUF Analysis 1 Total/NA Prep 200.7 136762 08/30/13 10:50 NMD2 TAL BUF Total/NA 200.7 Rev 4.4 137020 08/30/13 18:35 AMH TAL BUF Analysis TAL BUF Total/NA Analysis SM 2540D 1 136419 08/28/13 17:53 JMB Total/NA Analysis SM 5210B 136444 08/28/13 20:50 KS TAL BUF Total/NA Analysis SM 2540C 136636 08/29/13 18:58 JMB TAL BUF Total/NA Analysis SM 4500 H+ B 136645 08/29/13 19:22 KS TAL BUF Total/NA Prep Distill/CN 137115 09/03/13 17:21 NCH TAL BUF Total/NA Analysis 335.4 137128 09/03/13 20:38 JME TAL BUF Total/NA Prep 1664A 137141 09/04/13 01:21 RMB TAL BUF Total/NA TAL BUF Analysis 1664A 1 137144 09/04/13 01:21 RMB Total/NA Prep Distill/Phenol 136849 08/30/13 08:00 CLT TAL BUF

**Laboratory References:** 

Analysis

Total/NA

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

420.4

137156

1

09/04/13 04:05

RMB

TAL BUF

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# **Certification Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-44744-1

## **Laboratory: TestAmerica Buffalo**

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

| ority                 | Program                          |                             | EPA Region            | Certification ID    | Expiration Date |
|-----------------------|----------------------------------|-----------------------------|-----------------------|---------------------|-----------------|
| York                  | NELAP                            |                             | 2                     | 10026               | 04-01-14        |
| he following analytes | are included in this report, but | are not certified under the | his certification:    |                     |                 |
| nalysis Method        | Prep Method                      | Matrix                      | Analyt                | te                  |                 |
| 021B                  |                                  | Wastewater                  | sec-B                 | utylbenzene         |                 |
| 021B                  |                                  | Water                       | sec-B                 | utylbenzene         |                 |
| he following analytes | are included in this report, but | certification is not offere | ed by the governing a | authority.          |                 |
| nalysis Method        | Prep Method                      | Matrix                      | Analyt                | •                   |                 |
| 664A                  | 1664A                            | Wastewater                  | Oil & 0               | Grease              |                 |
| 664A                  | 1664A                            | Water                       | Oil & 0               | Grease              |                 |
| 08                    | 3510C                            | Wastewater                  | 4,4'-D                | DD                  |                 |
| 08                    | 3510C                            | Wastewater                  | 4,4'-D                | DT                  |                 |
| 08                    | 3510C                            | Water                       | 4,4'-D                | DD                  |                 |
| 08                    | 3510C                            | Water                       | 4,4'-D                | DT                  |                 |
| 021B                  |                                  | Wastewater                  | m,p-X                 | ylene               |                 |
| 021B                  |                                  | Wastewater                  | o-Xyle                | ene                 |                 |
| 021B                  |                                  | Water                       | m,p-X                 | ylene               |                 |
| 0210                  |                                  |                             |                       |                     |                 |
| 021B                  |                                  | Water                       | o-Xyle                | ene                 |                 |
|                       |                                  | Water<br>Wastewater         | •                     | chloroethene, Total |                 |
| 021B                  |                                  |                             | 1,2-Di                |                     |                 |
| 021B<br>260B          |                                  | Wastewater                  | 1,2-Di                | chloroethene, Total |                 |

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# **Method Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-44744-1

| lethod       | Method Description                     | Protocol  | Laboratory |
|--------------|--|-----------|------------|
| 260B         | Volatile Organic Compounds (GC/MS)     | SW846     | TAL BUF    |
| 270C         | Semivolatile Organic Compounds (GC/MS) | SW846     | TAL BUF    |
| )21B         | Volatile Organic Compounds (GC)        | SW846     | TAL BUF    |
| )8           | Organochlorine Pesticides in Water     | 40CFR136A | TAL BUF    |
| 00.7 Rev 4.4 | Metals (ICP)                           | EPA       | TAL BUF    |
| 664A         | HEM and SGT-HEM                        | 1664A     | TAL BUF    |
| 0.0          | Anions, Ion Chromatography             | MCAWW     | TAL BUF    |
| 0.2          | Alkalinity                             | MCAWW     | TAL BUF    |
| 5.4          | Cyanide, Total                         | MCAWW     | TAL BUF    |
| 0.4          | Phenolics, Total Recoverable           | MCAWW     | TAL BUF    |
| И 2540C      | Solids, Total Dissolved (TDS)          | SM        | TAL BUF    |
| И 2540D      | Solids, Total Suspended (TSS)          | SM        | TAL BUF    |
| И 4500 H+ B  | pH                                     | SM        | TAL BUF    |
| И 5210B      | BOD, 5-Day                             | SM        | TAL BUF    |

### Protocol References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TestAmerica Buffalo

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# **Sample Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-44744-1

| Lab Sample ID | Client Sample ID | Matrix     | Collected      | Received       |
|---------------|------------------|------------|----------------|----------------|
| 480-44744-2   | Pre-Carbon       | Wastewater | 08/28/13 12:45 | 08/28/13 13:15 |
| 480-44745-1   | Post-Carbon      | Wastewater | 08/28/13 12:30 | 08/28/13 13:15 |

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10 Hazelwood Drive

# **Chain of Custody Record**

Amherst, NY 14228-2298 Phone (716) 691-2600 Fax (716) 691-7991 Carrier Tracking No(s): **Client Information** Fischer, Brian J 480-8789-1179.1 Client Contact Phone E-Mail Page: Thomas Palmer brian.fischer@testamericainc.com Page 1 of 1 Company: Job #: Groundwater & Environmental Services Inc. **Analysis Requested** Due Date Requested: Preservation Codes: 495 Aero Drive Suite 3 A - HCL M - Hexane TAT Requested (days): B - NaOH N - None Cheektowaga C - Zn Acetate O - AsNaO2 State, Zip: D - Nitric Acid P - Na2O4S NY, 14225 E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2SO3 Phone: G - Amchlor S - H2SO4 Purchase Order not requir H - Ascorbic Acid T - TSP Dodecahydrate WO # I - Ice U - Acetone 8021B - (MOD) STARS List - VOA tpalmer@gesonline.com J - DI Water V - MCAA 8260B - (MOD) TCL list OLM04.2 containers K - EDTA W - ph 4-5 Project #: L - EDA Z - other (specify) NYSDEC - Gastown WWTP/Gastown Event Desc: Qtrly Pre-Carb 48002525 Other: New York Total Number of Matrix Sample (W=water, Type S=solid, Sample (C=comp, Sample Identification G=grab) BT=Tissue, A=Air Sample Date Time Special Instructions/Note: Preservation Code: D Pre-Carbon Water Possible Hazard Identification Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) Unknown Non-Hazard Flammable Skin Irritant Poison B Radiological Return To Client Disposal By Lab Archive For Months Deliverable Requested: I, II, III, IV, Other (specify) Special Instructions/QC Requirements: Empty Kit Relinquished by: Date: Method of Shipment: Time: Relinquished by: Company Relinquished by: Date/Time Received by: Company Relinquished by: Date/Time: Company Company

Custody Seals Intact:

Δ Yes Δ No

Custody Seal No.:

Page

6 of 19

Cooler Temperature(s) °C and Other Remarks:









10 Haze Good Drive

Amherst, NY 14228-2298

# **Chain of Custody Record**

<u>TestAmerica</u>

THE LEADER IN ENVIRONMENTAL TESTING

| Phone (716) 691-2600 Fax (716) 691-7991                  | Sampler:            | weid.  |              | Lab P                          | M:<br>ner, Bri      | ian .l                     |              |                   |                                |                                |  | C                                | arrier                            | Track                                | ing N                    | o(s):                  |                |       |               | OC No:<br>80-8776-1178.1 |                                 |          |
|--|---------------------|--|--------------|--------------------------------|---------------------|----------------------------|--------------|-------------------|--------------------------------|--------------------------------|--|----------------------------------|-----------------------------------|--------------------------------------|--------------------------|------------------------|----------------|-------|---------------|--------------------------|---------------------------------|----------|
| Client Information Client Contact:                       | Phone:              | isch   |              | E-Mai                          |                     | 10110                      |              |                   |                                |                                |  | $\dashv$                         |                                   |                                      |                          |                        |                |       | Pa            | age:                     |                                 |          |
| Thomas Palmer  | Phone: 484 64       | 5 230  | 2            | brian                          | .fische             | er@tes                     | stame        | ericair           | nc.co                          | m                              |  | $\perp$                          |                                   |                                      |                          |                        |                |       | _             | Page 1 of 1              |                                 |          |
| Company:   |                     |  |              |                                |                     |                            |              |                   | An                             | alvs                           | sis F                                    | Requ                             | este                              | ed                                   |                          |                        |                |       | 1             | ob #:                    |                                 |          |
| Groundwater & Environmental Services Inc                 | Due Date Requeste   | ed:  |              |                                |                     |                            |              |                   | T                              | T                              |  | 12 41.                           | Т                                 | T                                    | Т                        | Т                      |                |       | P             | reservation Codes        | <i>:</i> :                      |          |
| 495 Aero Drive Suite 3                                   | Date Date (toquest) |  |              |                                | - 88                |                            |              |                   |                                |                                |  |                                  |                                   |                                      |                          |                        |                |       | A             | A-HCL M                  | 1 - Hexane                      |          |
| City:  | TAT Requested (da   | ays):  |              |                                |                     |                            |              | Н                 |                                |                                |  |                                  |                                   |                                      |                          |                        |                |       |               |                          | l - None<br>) - AsNaO2          |          |
| Cheektowaga  |                     | 70   |              |                                |                     |                            |              |                   |                                |                                |  |                                  |                                   |                                      |                          |                        |                |       | 0             | D - Nitric Acid F        | - Na2O4S                        |          |
| State, Zip:<br>NY, 14225                                 | 5                   | W.   |              |                                |                     |                            |              |                   |                                |                                |  |                                  |                                   |                                      |                          |                        |                |       |               |                          | 2 - Na2SO3<br>R - Na2S2SO3      |          |
| Phone:   | PO #:               |  |              |                                | 1 2                 |                            |              | ΙI                |                                | -                              |  |                                  |                                   |                                      |                          |                        |                |       |               | G - Amchlor              | 6 - H2SO4                       |          |
|  | Purchase Order      | not requir                                       |              |                                | Q                   |                            |              | 흥                 |                                | - 8021                         | cide                                     | 7.7                              | and                               | igs                                  |                          |                        |                |       |               |                          | - TSP Dodeca<br>J - Acetone     | ahydrate |
| Email:<br>tpalmer@gesonline.com                          | WO #:               |  |              |                                | No or               |                            |              | erat              | 7                              | Ø                              | esti                                     | Š                                | Dem                               | ŝ                                    | ę l                      |                        |                |       |               | J - DI Water             | / - MCAA                        |          |
| Project Name:  | Project #:          |  |              |                                | S S                 | 48                         |              | Total Recoverable | Ř                              | 2                              | ž  | <u> </u>                         | gen                               | olve                                 | Soli                     |                        |                | 1     |               |                          | N - ph 4-5<br>Z - other (specif | fy)      |
| NYSDEC - Gastown WWTP/Gastown Event Desc: Qtrly Post-Car | 48002525            |  |              |                                | 90 %                | ŧ.                         | eas          | ᇤ                 | ō                              | Ę.                             | E  | Š                                | š                                 | Oiss                                 | P P                      | _                      |                |       |               | Other:                   |                                 |          |
| Site:  | SSOW#:              |  |              |                                | Sample (Yes         | S S                        | & Grea       | ļ,                | <u>ا</u>                       | IAR                            | A P                                      | ا ر <sub>s</sub>                 | ical                              | otal                                 | Sper                     | Tota                   |                |       | 5             | Julei.                   |                                 |          |
| New York   |                     |  |              |                                | Bred S              | ١٩                         | ₫            | olics             | ) T                            | S (a                           | 힏  | 6                                | hem                               | -                                    | - Se                     | ge,                    | 핕              |       | 1             |                          |                                 |          |
|  |                     |  | Jampie       | Matrix<br>W=water,             | Te Ite              | 200.7 - (MOD) Local Method | 1664A_Calc - | - Phenolics,      | 8260B - (MOD) TCL list OLM04.2 | 8021B - (MOD) STARS List - VOA | 608_Pest - Priority Pollutant Pesticides | 8270C - (MOD) TCL SVOA - OLM04.2 | 5210B - Biochemical Oxygen Demand | 2540C_Calcd - Total Dissolved Solids | - Total Suspended Solids | 335.4 - Cyanide, Total | SM4500_H+ - pH |       | Total Number  |                          |                                 |          |
|  |                     | Sample   | 1,700        | S=solid,<br>=waste/oil,        | E G                 |                            | ≰            | 4-                | . BO                           | ė                              | Pes                                      | ģ                                | ė                                 | ပ္ပါ                                 | ė                        | 4                      | 450            |       |               |                          |                                 |          |
| Sample Identification                                    | Sample Date         | Time   |              | =wasteroll,<br>Tissue, A=Air ) | Field               | 200.                       | 166          | 420.4             | 826                            | 802                            | 608                                      | 827                              | 521                               | 254                                  | 2540D                    | 335                    | SK             | 1     | ٥             | Special Inst             | ructions/No                     | te:      |
| Sample Identification                                    |                     | $\sim$   | Preservation | Code:                          | W                   | <b>₫</b> □                 | S            | S                 | Α                              | Α                              | N  | N N                              | 1 1                               | 1 1                                  | N                        | 3                      | N              |       | $\vee$        | P. L. College            |                                 |          |
| Post-Carbon  | 8/28/13             | 1230   | G            | Water                          | AI N                | 1                          |              |                   |                                |                                |  |                                  |                                   |                                      |                          |                        |                |       |               |                          |                                 |          |
| Post-Carbon  | 0/20/1-             | 160  | 0            |                                | IN IN               | +                          | $\vdash$     | $\vdash$          | $\vdash$                       | $\vdash$                       |  | +                                | $\dashv$                          | $\dashv$                             | $\dashv$                 | $\neg$                 | $\dashv$       | - 6   |               |                          |                                 |          |
|  |                     |  |              |                                | Ш                   | $\perp$                    | _            | $\vdash$          |                                | $\sqcup$                       |  | $\perp$                          | $\dashv$                          | $\dashv$                             | $\dashv$                 | $\dashv$               | _              |       |               |                          |                                 |          |
|  |                     |  |              |                                | Ш                   |                            |              |                   |                                |                                |  |                                  |                                   |                                      |                          |                        |                |       |               |                          |                                 |          |
|  |                     | -  |              |                                | ++                  | +                          | T            |                   | $\vdash$                       | $\Box$                         |  |                                  | $\dashv$                          | $\neg$                               | $\neg$                   |                        | $\neg$         |       |               |                          |                                 |          |
|  |                     |  |              |                                | ₩                   | +                          | +-           | ₩                 | _                              | $\vdash$                       |  | $\vdash$                         | $\dashv$                          | +                                    | $\dashv$                 | $\dashv$               | $\rightarrow$  |       |               |                          |                                 |          |
|  |                     |  |              |                                | П                   |                            |              |                   |                                |                                |  |                                  |                                   |                                      |                          |                        |                |       | <b></b>       |                          |                                 |          |
|  | 1                   |  |              |                                | П                   |                            | $\top$       |                   |                                |                                |  |                                  |                                   |                                      |                          |                        |                |       | Ш             |                          |                                 |          |
|  | -                   | -  | -            |                                | ₩                   | +                          | +            | +                 |                                | $\vdash$                       |  | $\vdash$                         | $\dashv$                          |                                      | Ш                        | ШШ                     |                |       | Ш             |                          | <b>.</b>                        |          |
|  |                     |  |              |                                | Ш                   | $\perp$                    |              |                   |                                |                                |  | $\sqcup$                         | _                                 |                                      | Ш                        |                        |                |       |               |                          | All I                           |          |
|  |                     |  |              |                                | Ш                   |                            |              |                   |                                |                                |  |                                  |                                   |                                      | Ш                        |                        |                |       |               |                          | , III                           |          |
|  | +                   | <del>                                     </del> |              |                                | ++                  | +                          | +            | $\vdash$          | $\vdash$                       |                                |  | $\Box$                           | $\neg$                            |                                      | 48                       | 0-4                    | 4745           | Ch    | aın           | of Custody               |                                 |          |
|  |                     |  |              |                                | 11                  | +                          | +            | $\vdash$          | ⊢                              | $\vdash$                       | _  | $\vdash$                         | -                                 | -                                    | -                        | -                      | -              | - 0   |               |                          |                                 |          |
|  |                     |  |              |                                | Ш                   |                            |              | 1                 |                                |                                |  |                                  |                                   |                                      |                          |                        |                |       |               |                          |                                 |          |
|  |                     |  |              |                                | $^{\dagger\dagger}$ |                            | $\top$       | $\top$            |                                |                                |  |                                  |                                   |                                      |                          |                        |                |       |               |                          |                                 |          |
|  |                     |  |              |                                | Ц,                  | Samol                      | lo Dis       | 20063             | 1//                            | foe n                          | nav                                      | he ass                           | 2000                              | od if                                | sam                      | nles                   | are r          | etain | ned i         | longer than 1 mo         | nth)                            |          |
| Possible Hazard Identification                           | - 1                 |  | diological   |                                | ٦                   |                            |              |                   |                                |                                | J  | Dis                              | 0000                              | J Dv                                 | l ah                     | pico                   |                | Arch  | hive          | For                      | Months                          |          |
| Non-Hazard Flammable Skin Irritant Poiso                 | n B Unknov          | vn Ra  | diological   |                                | -                   | Specia                     |              | n To              |                                |                                | auire                                    | ments                            | posa<br>S                         | ГБу                                  | Lab                      |                        |                | Aron  | 1110          | 101                      | nomino                          |          |
| Deliverable Requested: I, II, III, IV, Other (specify)   |                     |  |              |                                |                     | эрсска                     | 111130       | dollo             | 1137 0                         | 0 110                          | 90                                       |                                  |                                   |                                      |                          |                        |                |       |               |                          |                                 |          |
| Empty Kit Relinquished by:                               | ,                   | Date:  |              |                                | Time                |                            |              |                   |                                |                                |  | _                                | /                                 | Metho                                |                          |                        | 1              |       | 7             |                          |                                 |          |
| Relinquished by:   | Date/Time:          | 8/13 1   | 3/5          | mpany                          | ,                   | Re                         | ogived       | by:               |                                | 1                              | (  | XLA                              | n                                 |                                      |                          | Date                   | Time           | 79    | 31            | 13 1315                  | Company 7                       | J (      |
|  | - /                 | 0/00 /   |              | G55<br>mpany                   |                     | Ref                        | celver       | iby:              | 2                              | 7                              | 1  | 1 40                             | 1                                 | 1                                    |                          | Date                   |                | , ,   | -             | 2 100                    | Company                         | /\\\     |
| Relinquished by:   | Date/Time: 1        |  |              | inparty                        |                     | 7                          | 7            | /                 | 1                              |                                |  |                                  |                                   |                                      |                          |                        |                |       |               |                          |                                 |          |
| Relinquished by:   | Date/Time:          |  | Co           | mpany                          |                     | /R9                        | ceived       | 16                | 7                              | $\mathcal{I}$                  |  |                                  |                                   |                                      | 1                        | Date                   | /Time:         |       |               |                          | Company                         |          |
|  |                     |  |              |                                |                     | Y                          |              | _                 | _                              |                                | _  |                                  |                                   |                                      |                          | <u> </u>               |                |       | $\overline{}$ | 000                      |                                 |          |
| Custody Seals Intact: Custody Seal No.:                  |                     | 31041  |              |                                |                     | Co                         | oler T       | empera            | ature(s                        | ) °C a                         | nd Ot                                    | her Rer                          | narks:                            | _                                    | #                        | 3                      |                |       | 2             | C3.2                     | , 2.                            | 5        |
| Δ Yes Δ No   |                     |  |              |                                |                     |                            |              |                   |                                |                                |  |                                  |                                   |                                      | 7 .                      | _                      | _              |       | $\sim$        | 0,00                     | 100                             | _        |

# **Login Sample Receipt Checklist**

Client: New York State D.E.C. Job Number: 480-44744-1

Login Number: 44744 List Source: TestAmerica Buffalo

List Number: 1 Creator: Kolb, Chris M

| Question   | Answer | Comment  |
|--|--------|--|
| Radioactivity either was not measured or, if measured, is at or below background | True   |  |
| The cooler's custody seal, if present, is intact.                                | True   |  |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |  |
| Samples were received on ice.  | True   |  |
| Cooler Temperature is acceptable.  | True   |  |
| Cooler Temperature is recorded.  | True   |  |
| COC is present.  | True   |  |
| COC is filled out in ink and legible.  | True   |  |
| COC is filled out with all pertinent information.                                | False  | No: Analyses are listed on COC; individual samples are not designated Spec Analy |
| Is the Field Sampler's name present on COC?                                      | True   |  |
| There are no discrepancies between the sample IDs on the containers and the COC. | True   |  |
| Samples are received within Holding Time.  | True   |  |
| Sample containers have legible labels.   | True   |  |
| Containers are not broken or leaking.  | True   |  |
| Sample collection date/times are provided.                                       | True   |  |
| Appropriate sample containers are used.  | True   |  |
| Sample bottles are completely filled.  | True   |  |
| Sample Preservation Verified   | True   |  |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |  |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | True   |  |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True   |  |
| Multiphasic samples are not present.   | True   |  |
| Samples do not require splitting or compositing.                                 | True   |  |
| Sampling Company provided.   | N/A    |  |
| Samples received within 48 hours of sampling.                                    | True   |  |
| Samples requiring field filtration have been filtered in the field.              | True   |  |
| Chlorine Residual checked.   | N/A    |  |

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# **Login Sample Receipt Checklist**

Client: New York State D.E.C. Job Number: 480-44744-1

Login Number: 44745 List Source: TestAmerica Buffalo

List Number: 1 Creator: Kolb, Chris M

| Question   | Answer | Comment  |
|--|--------|--|
| Radioactivity either was not measured or, if measured, is at or below background | True   |  |
| The cooler's custody seal, if present, is intact.                                | True   |  |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |  |
| Samples were received on ice.  | True   |  |
| Cooler Temperature is acceptable.  | True   |  |
| Cooler Temperature is recorded.  | True   |  |
| COC is present.  | True   |  |
| COC is filled out in ink and legible.  | True   |  |
| COC is filled out with all pertinent information.                                | False  | No: Analyses are listed on COC; individual samples are not designated Spec Analy |
| Is the Field Sampler's name present on COC?                                      | True   |  |
| There are no discrepancies between the sample IDs on the containers and the COC. | True   |  |
| Samples are received within Holding Time.  | True   |  |
| Sample containers have legible labels.   | True   |  |
| Containers are not broken or leaking.  | True   |  |
| Sample collection date/times are provided.                                       | True   |  |
| Appropriate sample containers are used.  | True   |  |
| Sample bottles are completely filled.  | True   |  |
| Sample Preservation Verified   | True   |  |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |  |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | True   |  |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True   |  |
| Multiphasic samples are not present.   | True   |  |
| Samples do not require splitting or compositing.                                 | True   |  |
| Sampling Company provided.   | N/A    |  |
| Samples received within 48 hours of sampling.                                    | True   |  |
| Samples requiring field filtration have been filtered in the field.              | True   |  |
| Chlorine Residual checked.   | True   | Yes: Samples checked, no residual chlorine detected                              |

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THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo 10 Hazelwood Drive Amherst, NY 14228-2298 Tel: (716)691-2600

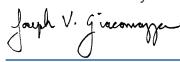
TestAmerica Job ID: 480-46484-1

Client Project/Site: NYSDEC-Gastown WWTP: Site# 915171

### For:

New York State D.E.C. 270 Michigan Avenue Buffalo, New York 14203

Attn: Mr. Glenn May



Authorized for release by: 9/30/2013 3:17:25 PM
Joe Giacomazza, Project Administrator joe.giacomazza@testamericainc.com

Designee for

Brian Fischer, Project Manager II (716)504-9835 brian.fischer@testamericainc.com

·····LINKS ·······

Review your project results through
Total Access

**Have a Question?** 



Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Joe Giacomazza **Project Administrator** 9/30/2013 3:17:25 PM

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

# **Table of Contents**

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# **Definitions/Glossary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Not detected at the reporting limit (or MDL or EDL if shown)

Relative Percent Difference, a measure of the relative difference between two points

Reporting Limit or Requested Limit (Radiochemistry)

**Practical Quantitation Limit** 

Toxicity Equivalent Factor (Dioxin)

Toxicity Equivalent Quotient (Dioxin)

**Quality Control** 

Relative error ratio

TestAmerica Job ID: 480-46484-1

### **Qualifiers**

### **GC VOA**

| Qualifier | Qualifier Description  |
|-----------|--|
| J         | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

# **Glossary**

ND

PQL

QC

RER

RPD

TEF

TEQ

RL

| Abbreviation   | These commonly used abbreviations may or may not be present in this report.                                 |  |  |  |  |  |
|--|---|--|--|--|--|--|
| ¤  | Listed under the "D" column to designate that the result is reported on a dry weight basis                  |  |  |  |  |  |
| %R   | R Percent Recovery  |  |  |  |  |  |
| CNF  | Contains no Free Liquid   |  |  |  |  |  |
| DER Duplicate error ratio (normalized absolute difference) |   |  |  |  |  |  |
| Dil Fac  | Dilution Factor   |  |  |  |  |  |
| DL, RA, RE, IN   | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |  |  |  |  |  |
| DLC  | Decision level concentration  |  |  |  |  |  |
| MDA  | Minimum detectable activity   |  |  |  |  |  |
| EDL  | Estimated Detection Limit   |  |  |  |  |  |
| MDC  | Minimum detectable concentration  |  |  |  |  |  |
| MDL  | Method Detection Limit  |  |  |  |  |  |
| ML   | Minimum Level (Dioxin)  |  |  |  |  |  |
| NC   | Not Calculated  |  |  |  |  |  |

TestAmerica Buffalo

### **Case Narrative**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-46484-1

Job ID: 480-46484-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-46484-1

### Receipt

The samples were received on 9/25/2013 11:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.4° C.

### GC/MS VOA

No analytical or quality issues were noted.

### GC VOA

Method(s) 8021B: The following sample was diluted to bring the concentration of target analytes within the calibration range: Influent (480-46484-3). Elevated reporting limits (RLs) are provided.

Method(s) 8021B: These samples were reinjected to confirm the original results. The Testamerica labels as well as the client labels were verified for both the original and confirmatory analysis. The results did confirm and the original results are therefore reported.

Method(s) 8021B: The following samples were diluted to bring the concentration of target analytes within the calibration range: (480-46484-2 MSD), Carbon 1 effluent (480-46484-2), Influent (480-46484-3). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

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Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-46484-1

Lab Sample ID: 480-46484-1

Matrix: Water

| Date Collected: 09/25/13 10:15 |  |
|--------------------------------|--|
| Date Received: 09/25/13 11:15  |  |

Client Sample ID: Carbon 3 effluent

| Method: 8021B - Volatile Or | ganic Compounds ( | (GC)      |          |       |      |   |          |                |         |
|-----------------------------|-------------------|-----------|----------|-------|------|---|----------|----------------|---------|
| Analyte                     | Result            | Qualifier | RL       | MDL   | Unit | D | Prepared | Analyzed       | Dil Fac |
| 1,2,4-Trimethylbenzene      | ND                |           | 0.20     | 0.035 | ug/L |   |          | 09/26/13 12:24 | 1       |
| 1,3,5-Trimethylbenzene      | ND                |           | 0.20     | 0.15  | ug/L |   |          | 09/26/13 12:24 | 1       |
| Benzene                     | 1.1               |           | 0.20     | 0.023 | ug/L |   |          | 09/26/13 12:24 | 1       |
| Ethylbenzene                | 0.14              | J         | 0.20     | 0.029 | ug/L |   |          | 09/26/13 12:24 | 1       |
| Isopropylbenzene            | ND                |           | 0.20     | 0.027 | ug/L |   |          | 09/26/13 12:24 | 1       |
| Methyl tert-butyl ether     | ND                |           | 0.40     | 0.044 | ug/L |   |          | 09/26/13 12:24 | 1       |
| m,p-Xylene                  | 0.11              | J         | 0.40     | 0.054 | ug/L |   |          | 09/26/13 12:24 | 1       |
| n-Butylbenzene              | ND                |           | 0.20     | 0.031 | ug/L |   |          | 09/26/13 12:24 | 1       |
| n-Propylbenzene             | ND                |           | 0.20     | 0.13  | ug/L |   |          | 09/26/13 12:24 | 1       |
| o-Xylene                    | ND                |           | 0.20     | 0.027 | ug/L |   |          | 09/26/13 12:24 | 1       |
| p-Cymene                    | ND                |           | 0.20     | 0.030 | ug/L |   |          | 09/26/13 12:24 | 1       |
| sec-Butylbenzene            | ND                |           | 0.20     | 0.020 | ug/L |   |          | 09/26/13 12:24 | 1       |
| Toluene                     | 0.38              |           | 0.20     | 0.036 | ug/L |   |          | 09/26/13 12:24 | 1       |
| Xylenes, Total              | 0.27              | J         | 0.60     | 0.054 | ug/L |   |          | 09/26/13 12:24 | 1       |
| Surrogate                   | %Recovery         | Qualifier | Limits   |       |      |   | Prepared | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene      | 112               |           | 63 - 145 |       |      | - |          | 09/26/13 12:24 | 1       |
| 4-Bromofluorobenzene        | 114               |           | 64 - 141 |       |      |   |          | 09/26/13 12:24 | 1       |

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-46484-1

Lab Sample ID: 480-46484-2

09/26/13 11:45

09/26/13 11:45

Matrix: Water

Client Sample ID: Carbon 1 effluent Date Collected: 09/25/13 10:30

Date Received: 09/25/13 11:15

a,a,a-Trifluorotoluene

4-Bromofluorobenzene

| Analyte                 | Result    | Qualifier | RL     | MDL   | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------|-----------|-----------|--------|-------|------|---|----------|----------------|---------|
| 1,2,4-Trimethylbenzene  | 3.9       |           | 0.20   | 0.035 | ug/L |   |          | 09/26/13 11:45 | 1       |
| 1,3,5-Trimethylbenzene  | 1.4       |           | 0.20   | 0.15  | ug/L |   |          | 09/26/13 11:45 | 1       |
| Isopropylbenzene        | 0.47      |           | 0.20   | 0.027 | ug/L |   |          | 09/26/13 11:45 | 1       |
| Methyl tert-butyl ether | ND        |           | 0.40   | 0.044 | ug/L |   |          | 09/26/13 11:45 | 1       |
| m,p-Xylene              | 40        |           | 0.40   | 0.054 | ug/L |   |          | 09/26/13 11:45 | 1       |
| n-Butylbenzene          | ND        |           | 0.20   | 0.031 | ug/L |   |          | 09/26/13 11:45 | 1       |
| n-Propylbenzene         | ND        |           | 0.20   | 0.13  | ug/L |   |          | 09/26/13 11:45 | 1       |
| o-Xylene                | 21        |           | 0.20   | 0.027 | ug/L |   |          | 09/26/13 11:45 | 1       |
| p-Cymene                | ND        |           | 0.20   | 0.030 | ug/L |   |          | 09/26/13 11:45 | 1       |
| sec-Butylbenzene        | ND        |           | 0.20   | 0.020 | ug/L |   |          | 09/26/13 11:45 | 1       |
| Xylenes, Total          | 78        |           | 0.60   | 0.054 | ug/L |   |          | 09/26/13 11:45 | 1       |
| Surrogate               | %Recovery | Qualifier | Limits |       |      |   | Prepared | Analyzed       | Dil Fac |

| Method: 8021B - Volatile Organic C | Compounds (GC) - DL |    |          |     |          |                |         |
|------------------------------------|---------------------|----|----------|-----|----------|----------------|---------|
| Analyte                            | Result Qualifier    | RL | MDL Unit | t D | Prepared | Analyzed       | Dil Fac |
| Benzene                            | 2200                | 20 | 2.3 ug/L |     |          | 09/27/13 11:47 | 100     |
| Ethylbenzene                       | 59                  | 20 | 2.9 ug/L | -   |          | 09/27/13 11:47 | 100     |
| Toluene                            | 310                 | 20 | 3.6 ua/L | _   |          | 09/27/13 11:47 | 100     |

63 - 145

64 - 141

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Client: New York State D.E.C.

**Client Sample ID: Influent** 

Date Collected: 09/25/13 10:40

Date Received: 09/25/13 11:15

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-46484-1

Lab Sample ID: 480-46484-3

**Matrix: Water** 

| Analyte                 | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,2,4-Trimethylbenzene  | 33        |           | 1.0      | 0.17 | ug/L |   |          | 09/26/13 11:08 | 5       |
| 1,3,5-Trimethylbenzene  | 12        |           | 1.0      | 0.75 | ug/L |   |          | 09/26/13 11:08 | 5       |
| Isopropylbenzene        | 3.6       |           | 1.0      | 0.14 | ug/L |   |          | 09/26/13 11:08 | 5       |
| Methyl tert-butyl ether | ND        |           | 2.0      | 0.22 | ug/L |   |          | 09/26/13 11:08 | 5       |
| m,p-Xylene              | 260       |           | 2.0      | 0.27 | ug/L |   |          | 09/26/13 11:08 | 5       |
| n-Butylbenzene          | 0.82      | J         | 1.0      | 0.15 | ug/L |   |          | 09/26/13 11:08 | 5       |
| n-Propylbenzene         | ND        |           | 1.0      | 0.65 | ug/L |   |          | 09/26/13 11:08 | 5       |
| o-Xylene                | 120       |           | 1.0      | 0.14 | ug/L |   |          | 09/26/13 11:08 | 5       |
| p-Cymene                | ND        |           | 1.0      | 0.15 | ug/L |   |          | 09/26/13 11:08 | 5       |
| sec-Butylbenzene        | ND        |           | 1.0      | 0.10 | ug/L |   |          | 09/26/13 11:08 | 5       |
| Xylenes, Total          | 530       |           | 3.0      | 0.27 | ug/L |   |          | 09/26/13 11:08 | 5       |
| Surrogate               | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene  | 113       |           | 63 - 145 |      |      | - |          | 09/26/13 11:08 | 5       |
| 4-Bromofluorobenzene    | 116       |           | 64 - 141 |      |      |   |          | 09/26/13 11:08 | 5       |

| Method: 8021B - Volatile Org | ganic Compounds (GC) - DL |    |          |   |          | Analyzed Dil Fac 09/27/13 12:25 250 09/27/13 12:25 250 09/27/13 12:25 250 |         |
|------------------------------|---------------------------|----|----------|---|----------|---|---------|
| Analyte                      | Result Qualifier          | RL | MDL Unit | D | Prepared | Analyzed  | Dil Fac |
| Benzene                      | 6700                      | 50 | 5.8 ug/L |   |          | 09/27/13 12:25  | 250     |
| Ethylbenzene                 | 580                       | 50 | 7.2 ug/L |   |          | 09/27/13 12:25  | 250     |
| Toluene                      | 2100                      | 50 | 8.9 ug/L |   |          | 09/27/13 12:25  | 250     |

### **Lab Chronicle**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-46484-1

Client Sample ID: Carbon 3 effluent Lab Sample ID: 480-46484-1

Date Collected: 09/25/13 10:15 Matrix: Water

Date Received: 09/25/13 11:15

Batch Dilution Batch Batch Prepared Prep Type Method Factor Number Type Run or Analyzed Analyst Lab Total/NA Analysis 8021B 141232 09/26/13 12:24 DGB TAL BUF

Client Sample ID: Carbon 1 effluent Lab Sample ID: 480-46484-2

Date Collected: 09/25/13 10:30 Matrix: Water

Date Received: 09/25/13 11:15

|           | Batch    | Batch  |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|--------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Туре     | Method | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8021B  |     | 1        | 141232 | 09/26/13 11:45 | DGB     | TAL BUF |
| Total/NA  | Analysis | 8021B  | DL  | 100      | 141464 | 09/27/13 11:47 | DGB     | TAL BUF |

Client Sample ID: Influent Lab Sample ID: 480-46484-3

Date Collected: 09/25/13 10:40 Matrix: Water

Date Received: 09/25/13 11:15

|           | Batch    | Batch  |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|--------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8021B  |     | 5        | 141232 | 09/26/13 11:08 | DGB     | TAL BUF |
| Total/NA  | Analysis | 8021B  | DL  | 250      | 141464 | 09/27/13 12:25 | DGB     | TAL BUF |

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# **Certification Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-46484-1

## Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority         | Program       | EPA Region | Certification ID | <b>Expiration Date</b> |
|-------------------|---------------|------------|------------------|------------------------|
| Arkansas DEQ      | State Program | 6          | 88-0686          | 10-06-13               |
| California        | NELAP         | 9          | 1169CA           | 09-30-13               |
| Connecticut       | State Program | 1          | PH-0568          | 09-30-14               |
| Florida           | NELAP         | 4          | E87672           | 06-30-14               |
| Georgia           | State Program | 4          | N/A              | 03-31-14               |
| Ilinois           | NELAP         | 5          | 200003           | 09-30-13               |
| owa               | State Program | 7          | 374              | 03-15-15               |
| Kansas            | NELAP         | 7          | E-10187          | 01-31-14               |
| Kentucky          | State Program | 4          | 90029            | 12-31-13               |
| Kentucky (UST)    | State Program | 4          | 30               | 04-01-14               |
| Louisiana         | NELAP         | 6          | 02031            | 06-30-14               |
| Maine             | State Program | 1          | NY00044          | 12-04-14               |
| Maryland          | State Program | 3          | 294              | 03-31-14               |
| Massachusetts     | State Program | 1          | M-NY044          | 06-30-14               |
| Michigan          | State Program | 5          | 9937             | 04-01-14               |
| Minnesota         | NELAP         | 5          | 036-999-337      | 12-31-13               |
| New Hampshire     | NELAP         | 1          | 2973             | 09-11-14               |
| New Jersey        | NELAP         | 2          | NY455            | 06-30-14               |
| New York          | NELAP         | 2          | 10026            | 04-01-14               |
| North Dakota      | State Program | 8          | R-176            | 03-31-14               |
| Oklahoma          | State Program | 6          | 9421             | 08-31-14               |
| Oregon            | NELAP         | 10         | NY200003         | 06-09-14               |
| Pennsylvania      | NELAP         | 3          | 68-00281         | 07-31-14               |
| Rhode Island      | State Program | 1          | LAO00328         | 12-31-13               |
| Гennessee         | State Program | 4          | TN02970          | 04-01-14               |
| Гехаs             | NELAP         | 6          | T104704412-11-2  | 07-31-14               |
| JSDA              | Federal       |            | P330-11-00386    | 11-22-14               |
| /irginia          | NELAP         | 3          | 460185           | 09-14-14               |
| Vashington        | State Program | 10         | C784             | 02-10-14               |
| West Virginia DEP | State Program | 3          | 252              | 09-30-13               |
| Wisconsin         | State Program | 5          | 998310390        | 08-31-14               |

# **Method Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-46484-1

| 84-411 | Mathed Beardatter               | Ductoral | l -b       |
|--------|---------------------------------|----------|------------|
| Method | Method Description              | Protocol | Laboratory |
| 8021B  | Volatile Organic Compounds (GC) | SW846    | TAL BUF    |

### **Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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# **Sample Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-46484-1

| Lab Sample ID | Client Sample ID  | Matrix | Collected      | Received       |
|---------------|-------------------|--------|----------------|----------------|
| 480-46484-1   | Carbon 3 effluent | Water  | 09/25/13 10:15 | 09/25/13 11:15 |
| 480-46484-2   | Carbon 1 effluent | Water  | 09/25/13 10:30 | 09/25/13 11:15 |
| 480-46484-3   | Influent          | Water  | 09/25/13 10:40 | 09/25/13 11:15 |

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# Chain of **Custody Record**

Temperature on Receipt

**TestAmerica** 

| TAL-4124 (1007)  |                  | Drinkin      | g Wa              | ter?   | Yes            | $\Box$ | No               | A.           |        |       | THE           | LEAD       | ER IN  | IENV     | /IROI           | MEI    | NTAL          | TES     | STINC             | G .   |                        |                  |
|--|------------------|--------------|-------------------|--------|----------------|--------|------------------|--------------|--------|-------|---------------|------------|--------|----------|-----------------|--------|---------------|---------|-------------------|-------|------------------------|------------------|
|  |                  | Project      | Manage            | er (   | len            | (      | Ma               | <b>^</b>     |        |       |               |            |        |          | D               | ate G  | ?. <b>)</b> S | 5-13    | 3                 | 1     | Chain of Custod<br>237 | Number           |
| Address 270 Michigan Ave   |                  | Telepho      | ne Nun            | nber ( | Area C         | Code)/ | Fax <del>N</del> | ambe         | r      |       |               |            |        |          | -               | ab Nui |               |         |                   |       | Page \                 | of/              |
| City Buttaki State Zip Code  | 3                | Site Con     | ntact<br>ru/ (    | 60     | 5)             | L      | ab Co            | ntact<br>F   |        |       |               | 7          |        |          | nalys<br>ore sp |        |               |         |                   |       |                        |                  |
| Project Name and Location (State)  |                  | Carrier/     | Waybill           | Numi   | ber            | '      |                  |              |        |       |               | STARS LE   |        |          |                 |        |               |         |                   |       | Specia                 | al Instructions/ |
| Contract/Purchase Order/Quote No. Site # 915171 Pupeit + 4800                            | 02525            |              |                   | Matr   | ix             |        |                  | Con.<br>Pres |        |       |               |            |        |          |                 |        |               |         |                   |       |                        | ions of Receipt  |
| Sample I.D. No. and Description (Containers for each sample may be combined on one line) |                  | Time         | Air               | Sed.   | Soil           | 7/2000 | H2SO4            | HNO3         | HCI    | NaOH  | ZnAc/<br>NaOH | 80313      |        |          |                 |        |               |         |                   |       |                        |                  |
| CWIST S LECTURE .  | 25-13 10         | 15           | ×                 |        |                |        |                  |              | >      |       |               | 3          |        |          |                 |        |               |         |                   |       |                        |                  |
| Carban 1 Effluent  | 10               | 3T           | $\perp \parallel$ |        |                |        |                  |              |        |       |               | .3         |        |          |                 |        |               |         |                   |       |                        |                  |
| Influent.  | 10               | 940          | 1                 |        |                |        |                  |              | 上      |       |               | 3          |        |          |                 |        |               |         |                   |       |                        |                  |
|  |                  |              |                   |        |                |        |                  |              |        |       |               |            |        |          |                 |        |               |         |                   |       |                        |                  |
|  |                  |              |                   |        |                |        |                  |              |        |       |               |            |        |          |                 |        |               |         |                   |       |                        |                  |
|  |                  |              |                   |        |                |        |                  |              |        |       |               |            |        |          |                 |        |               | $\top$  |                   |       |                        |                  |
|  |                  |              |                   |        |                |        |                  |              |        |       |               |            |        |          |                 |        |               |         |                   |       |                        |                  |
|  |                  |              |                   |        |                |        | $\top$           |              |        |       |               | +          | $\top$ | +        |                 |        |               | $\top$  |                   |       |                        |                  |
|  |                  |              |                   | +      | $\Box$         | +      |                  |              |        |       |               |            | +      | +        | $\Box$          | +      | +             | +       |                   |       |                        |                  |
|  |                  |              | +                 | +      | $\vdash$       | +      |                  |              |        |       |               | _          | -      | +        | +               | +      | +             | +-      |                   | -     |                        |                  |
|  | _                |              | -                 | +      | $\vdash$       | +      | -                | -            |        |       | $\perp$       | +          | +      | +        | $\vdash$        | +      | +             | +       |                   | +     |                        |                  |
|  |                  |              | +                 | -      | $\sqcup$       | _      | 1                |              |        |       |               | _          | -      | +        |                 | 4      | $\perp$       | 1       |                   | -     |                        |                  |
| Possible Hazard Identification   |                  |              | 1000              | -(- 0  |                |        |                  |              |        |       |               |            |        | $\perp$  |                 |        |               |         |                   |       |                        |                  |
|  | oison B 🔲 (      | Unknown      | 1 '               |        | sposa<br>To Ci |        |                  | Dispo        | sal E  | 3v La | ь [           | Arch       | ive Fo | r        |                 | Month. | (A            | 1 fee m | nay be<br>han 1 i | asses | ssed if samples a      | re retained      |
| Turn Around Time Required  24 Hours 48 Hoyrs 7 Days 14 Days                              |                  | ☐ Othe       |                   |        |                |        |                  |              |        |       | (Spec         |            |        |          |                 |        |               | ngor u  |                   |       | <u></u>                |                  |
| 1. Relinguisted By   |                  | Date<br>9.25 |                   | 77     | me<br>   5     | _      | 1.               | Recei        | ived I | By    |               |            | ,<br>S |          | 1               |        |               | TA      | 13                |       | Date<br>9-25-13        | Time             |
| 2. Relinquished By   |                  | Date         |                   |        | me             |        | 2.               | Recei        | ived I | By    |               |            |        |          |                 |        |               |         |                   |       | Date                   | Time             |
| 3. Relinquished By   |                  | Date         |                   | 1      | me             |        | 3.               | Recei        | ived I | Ву    |               |            |        |          |                 |        |               |         |                   |       | Date                   | Time             |
| Comments   |                  |              |                   |        |                |        |                  |              |        |       |               | <u>ل</u> إ | ; °    | 7        |                 |        | 3             | <u></u> |                   |       |                        |                  |
| DISTRIBUTION: WHITE - Returned to Client with Report: CANA                               | IRV - Stavs with | the Same     | ole: PII          | VK - F | ield C         | anı,   |                  |              |        |       |               |            |        | <b>~</b> |                 | (      | ٦,            |         |                   |       |                        |                  |















# **Login Sample Receipt Checklist**

Client: New York State D.E.C. Job Number: 480-46484-1

Login Number: 46484 List Source: TestAmerica Buffalo

List Number: 1

Creator: Stau, Brandon M

| Question   | Answer | Comment |
|--|--------|---------|
| Radioactivity either was not measured or, if measured, is at or below background | True   |         |
| The cooler's custody seal, if present, is intact.                                | True   |         |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |         |
| Samples were received on ice.  | True   |         |
| Cooler Temperature is acceptable.  | True   |         |
| Cooler Temperature is recorded.  | True   |         |
| COC is present.  | True   |         |
| COC is filled out in ink and legible.  | True   |         |
| COC is filled out with all pertinent information.                                | True   |         |
| Is the Field Sampler's name present on COC?                                      | True   |         |
| There are no discrepancies between the sample IDs on the containers and the COC. | True   |         |
| Samples are received within Holding Time.  | True   |         |
| Sample containers have legible labels.   | True   |         |
| Containers are not broken or leaking.  | True   |         |
| Sample collection date/times are provided.                                       | True   |         |
| Appropriate sample containers are used.  | True   |         |
| Sample bottles are completely filled.  | True   |         |
| Sample Preservation Verified   | True   |         |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |         |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | True   |         |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True   |         |
| Multiphasic samples are not present.   | True   |         |
| Samples do not require splitting or compositing.                                 | True   |         |
| Sampling Company provided.   | True   | nysdec  |
| Samples received within 48 hours of sampling.                                    | True   |         |
| Samples requiring field filtration have been filtered in the field.              | N/A    |         |
| Chlorine Residual checked.   | N/A    |         |

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THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo 10 Hazelwood Drive Amherst, NY 14228-2298 Tel: (716)691-2600

TestAmerica Job ID: 480-46482-1

Client Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Sampling Event: Mthly Post-Carbon Mthly Pre-Carbon

### For:

New York State D.E.C. 270 Michigan Avenue Buffalo, New York 14203

Attn: Mr. Glenn May



Authorized for release by: 10/7/2013 10:41:18 AM

Joe Giacomazza, Project Administrator joe.giacomazza@testamericainc.com

Designee for

Brian Fischer, Project Manager II (716)504-9835

brian.fischer@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

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Joseph V. Girconoger

Joe Giacomazza

Project Administrator

10/7/2013 10:41:18 AM

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TestAmerica Job ID: 480-46482-1

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

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# **Definitions/Glossary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-46482-1

### **Qualifiers**

### **GC VOA**

| Qualifier | Qualifier Description  |
|-----------|--|
| J         | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### **General Chemistry**

| Qualifier | Qualifier Description                             |
|-----------|---|
| HF        | Field parameter with a holding time of 15 minutes |
| В         | Compound was found in the blank and sample.       |

| Glossary       |   |
|----------------|---|
| Abbreviation   | These commonly used abbreviations may or may not be present in this report.                                 |
| ¤              | Listed under the "D" column to designate that the result is reported on a dry weight basis                  |
| %R             | Percent Recovery  |
| CNF            | Contains no Free Liquid   |
| DER            | Duplicate error ratio (normalized absolute difference)  |
| Dil Fac        | Dilution Factor   |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC            | Decision level concentration  |
| MDA            | Minimum detectable activity   |
| EDL            | Estimated Detection Limit   |
| MDC            | Minimum detectable concentration  |

MDL Method Detection Limit Minimum Level (Dioxin) ML

NC Not Calculated

Not detected at the reporting limit (or MDL or EDL if shown) ND

PQL Practical Quantitation Limit

**Quality Control** QC RER Relative error ratio

RL Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points RPD

TEF Toxicity Equivalent Factor (Dioxin) TEQ Toxicity Equivalent Quotient (Dioxin)

TestAmerica Buffalo

### **Case Narrative**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-46482-1

Job ID: 480-46482-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-46482-1

### Receipt

The samples were received on 9/25/2013 11:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.1° C and 3.4° C.

### GC/MS VOA

No analytical or quality issues were noted.

### Ion Chromatography

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: (480-46483-1 MS), Pre-Carbon (480-46483-1). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The method blank for batch 141528 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 141528 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

### **GC VOA**

Method(s) 8021B: These samples were reinjected to confirm the original results. The Testamericao labels as well as the client labels were verified for both the original and confirmatory analysis. The results did confirm and the original results are therefore reported.

No other analytical or quality issues were noted.

### Metals

No analytical or quality issues were noted.

### **General Chemistry**

Method(s) SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample(s) has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Post-Carbon (480-46482-1)

No other analytical or quality issues were noted.

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Project/Site: NYSDEC-Gastown WWTP: Site# 915171

**Client Sample ID: Post-Carbon** 

Date Collected: 09/25/13 10:25 Date Received: 09/25/13 11:15

Client: New York State D.E.C.

Lab Sample ID: 480-46482-1

**Matrix: Wastewater** 

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| 1,1,1-Trichloroethane       | ND     |           | 1.0 | 0.82 | ug/L |   |          | 10/04/13 05:29 | 1       |
| 1,1,2,2-Tetrachloroethane   | ND     |           | 1.0 | 0.21 | ug/L |   |          | 10/04/13 05:29 | 1       |
| 1,1,2-Trichloroethane       | ND     |           | 1.0 | 0.23 | ug/L |   |          | 10/04/13 05:29 | 1       |
| 1,1-Dichloroethane          | ND     |           | 1.0 | 0.38 | ug/L |   |          | 10/04/13 05:29 | 1       |
| 1,1-Dichloroethene          | ND     |           | 1.0 | 0.29 | ug/L |   |          | 10/04/13 05:29 | 1       |
| 1,2-Dichloroethane          | ND     |           | 1.0 | 0.21 | ug/L |   |          | 10/04/13 05:29 | 1       |
| 1,2-Dichloroethene, Total   | ND     |           | 2.0 | 0.70 | ug/L |   |          | 10/04/13 05:29 | 1       |
| 1,2-Dichloropropane         | ND     |           | 1.0 | 0.72 | ug/L |   |          | 10/04/13 05:29 | 1       |
| 2-Hexanone                  | ND     |           | 5.0 | 1.2  | ug/L |   |          | 10/04/13 05:29 | 1       |
| 2-Butanone (MEK)            | ND     |           | 10  | 1.3  | ug/L |   |          | 10/04/13 05:29 | 1       |
| 4-Methyl-2-pentanone (MIBK) | ND     |           | 5.0 | 2.1  | ug/L |   |          | 10/04/13 05:29 | 1       |
| Acetone                     | ND     |           | 10  | 3.0  | ug/L |   |          | 10/04/13 05:29 | 1       |
| Benzene                     | 19     |           | 1.0 | 0.41 | ug/L |   |          | 10/04/13 05:29 | 1       |
| Bromodichloromethane        | ND     |           | 1.0 | 0.39 | ug/L |   |          | 10/04/13 05:29 | 1       |
| Bromoform                   | ND     |           | 1.0 | 0.26 | ug/L |   |          | 10/04/13 05:29 | 1       |
| Bromomethane                | ND     |           | 1.0 | 0.69 | ug/L |   |          | 10/04/13 05:29 | 1       |
| Carbon disulfide            | ND     |           | 1.0 | 0.19 | ug/L |   |          | 10/04/13 05:29 | 1       |
| Carbon tetrachloride        | ND     |           | 1.0 | 0.27 | ug/L |   |          | 10/04/13 05:29 | 1       |
| Chlorobenzene               | ND     |           | 1.0 | 0.75 | ug/L |   |          | 10/04/13 05:29 | 1       |
| Dibromochloromethane        | ND     |           | 1.0 | 0.32 | ug/L |   |          | 10/04/13 05:29 | 1       |
| Chloroethane                | ND     |           | 1.0 | 0.32 | ug/L |   |          | 10/04/13 05:29 | 1       |
| Chloroform                  | 2.7    |           | 1.0 | 0.34 | ug/L |   |          | 10/04/13 05:29 | 1       |
| Chloromethane               | ND     |           | 1.0 | 0.35 | ug/L |   |          | 10/04/13 05:29 | 1       |
| cis-1,3-Dichloropropene     | ND     |           | 1.0 | 0.36 | ug/L |   |          | 10/04/13 05:29 | 1       |
| Ethylbenzene                | ND     |           | 1.0 | 0.74 | ug/L |   |          | 10/04/13 05:29 | 1       |
| Methylene Chloride          | ND     |           | 1.0 | 0.44 | ug/L |   |          | 10/04/13 05:29 | 1       |
| Styrene                     | ND     |           | 1.0 | 0.73 | ug/L |   |          | 10/04/13 05:29 | 1       |
| Tetrachloroethene           | ND     |           | 1.0 | 0.36 | ug/L |   |          | 10/04/13 05:29 | 1       |
| Toluene                     | ND     |           | 1.0 | 0.51 | ug/L |   |          | 10/04/13 05:29 | 1       |
| trans-1,3-Dichloropropene   | ND     |           | 1.0 | 0.37 | ug/L |   |          | 10/04/13 05:29 | 1       |
| Trichloroethene             | ND     |           | 1.0 | 0.46 | ug/L |   |          | 10/04/13 05:29 | 1       |
| Vinyl chloride              | ND     |           | 1.0 | 0.90 | ug/L |   |          | 10/04/13 05:29 | 1       |
| Vinyl acetate               | ND     |           | 5.0 | 0.85 | ug/L |   |          | 10/04/13 05:29 | 1       |
| Xylenes, Total              | ND     |           | 2.0 | 0.66 | ug/L |   |          | 10/04/13 05:29 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 104       |           | 66 - 137 |          | 10/04/13 05:29 | 1       |
| Toluene-d8 (Surr)            | 102       |           | 71 - 126 |          | 10/04/13 05:29 | 1       |
| 4-Bromofluorobenzene (Surr)  | 99        |           | 73 - 120 |          | 10/04/13 05:29 | 1       |

| Method: 8021B - | Volatile Organic | Compounds (GC) |
|-----------------|------------------|----------------|
|-----------------|------------------|----------------|

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|-------------------------|---------|-----------|------|-------|------|---|----------|----------------|---------|
| Analyte                 | Result  | Qualifier | RL   | MDL   | Unit | D | Prepared | Analyzed       | Dil Fac |
| 1,2,4-Trimethylbenzene  | ND      |           | 0.20 | 0.035 | ug/L |   |          | 09/26/13 13:02 | 1       |
| 1,3,5-Trimethylbenzene  | ND      |           | 0.20 | 0.15  | ug/L |   |          | 09/26/13 13:02 | 1       |
| Benzene                 | 19      |           | 0.20 | 0.023 | ug/L |   |          | 09/26/13 13:02 | 1       |
| Ethylbenzene            | 0.094   | J         | 0.20 | 0.029 | ug/L |   |          | 09/26/13 13:02 | 1       |
| Isopropylbenzene        | ND      |           | 0.20 | 0.027 | ug/L |   |          | 09/26/13 13:02 | 1       |
| Methyl tert-butyl ether | ND      |           | 0.40 | 0.044 | ug/L |   |          | 09/26/13 13:02 | 1       |
| m,p-Xylene              | 0.063   | J         | 0.40 | 0.054 | ug/L |   |          | 09/26/13 13:02 | 1       |
| n-Butylbenzene          | ND      |           | 0.20 | 0.031 | ug/L |   |          | 09/26/13 13:02 | 1       |
|                         |         |           |      |       |      |   |          |                |         |

TestAmerica Buffalo

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10/7/2013

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Lab Cample ID: 400 40400 4

TestAmerica Job ID: 480-46482-1

Lab Sample ID: 480-46482-1

Matrix: Wastewater

# Client Sample ID: Post-Carbon

Date Collected: 09/25/13 10:25 Date Received: 09/25/13 11:15

| Analyte                     | Result    | Qualifier | RL       | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
|-----------------------------|-----------|-----------|----------|--------|------|---|----------------|----------------|---------|
| n-Propylbenzene             | ND        |           | 0.20     | 0.13   | ug/L |   |                | 09/26/13 13:02 | 1       |
| o-Xylene                    | ND        |           | 0.20     | 0.027  | ug/L |   |                | 09/26/13 13:02 | 1       |
| p-Cymene                    | ND        |           | 0.20     | 0.030  | ug/L |   |                | 09/26/13 13:02 | 1       |
| sec-Butylbenzene            | ND        |           | 0.20     | 0.020  | ug/L |   |                | 09/26/13 13:02 | 1       |
| Toluene                     | 0.51      |           | 0.20     | 0.036  | ug/L |   |                | 09/26/13 13:02 | 1       |
| Xylenes, Total              | 0.10      | J         | 0.60     | 0.054  | ug/L |   |                | 09/26/13 13:02 | 1       |
| Surrogate                   | %Recovery | Qualifier | Limits   |        |      |   | Prepared       | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene      | 113       |           | 63 - 145 |        |      |   |                | 09/26/13 13:02 | 1       |
| 4-Bromofluorobenzene        | 114       |           | 64 - 141 |        |      |   |                | 09/26/13 13:02 | 1       |
| Method: 200.7 Rev 4.4 - Met | als (ICP) |           |          |        |      |   |                |                |         |
| Analyte                     | Result    | Qualifier | RL       | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Iron                        | 173       |           | 50.0     | 19.3   | ug/L |   | 09/26/13 08:35 | 09/26/13 17:12 | 1       |
| General Chemistry           |           |           |          |        |      |   |                |                |         |
| Analyte                     | Result    | Qualifier | RL       | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Cyanide, Total              | 0.36      |           | 0.010    | 0.0050 | mg/L |   | 09/30/13 02:06 | 09/30/13 22:28 | 1       |
| Analyte                     | Result    | Qualifier | RL       | RL     | Unit | D | Prepared       | Analyzed       | Dil Fac |
| pH                          | 7.83      | HF        | 0.100    | 0.100  | SU   |   |                | 09/25/13 19:21 |         |

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-46482-1

Lab Sample ID: 480-46483-1

**Matrix: Wastewater** 

Date Collected: 09/25/13 10:35 Date Received: 09/25/13 11:15

**Client Sample ID: Pre-Carbon** 

| Method: 200.7 Rev 4.4 - Metals (ICP | )      |           |      |      |      |   |                |                |         |
|-------------------------------------|--------|-----------|------|------|------|---|----------------|----------------|---------|
| Analyte                             | Result | Qualifier | RL   | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Calcium                             | 137000 |           | 500  | 100  | ug/L |   | 09/26/13 08:35 | 09/26/13 17:14 | 1       |
| Iron                                | 858    |           | 50.0 | 19.3 | ug/L |   | 09/26/13 08:35 | 09/26/13 17:14 | 1       |
| Magnesium                           | 78100  |           | 200  | 43.4 | ug/L |   | 09/26/13 08:35 | 09/26/13 17:14 | 1       |
| Potassium                           | 5890   |           | 500  | 100  | ug/L |   | 09/26/13 08:35 | 09/26/13 17:14 | 1       |
| Sodium                              | 78700  |           | 1000 | 324  | ug/L |   | 09/26/13 08:35 | 09/26/13 17:14 | 1       |
| -<br>General Chemistry              |        |           |      |      |      |   |                |                |         |
| Analyte                             | Result | Qualifier | RL   | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Chloride                            | 99.0   | В         | 2.5  | 1.4  | mg/L |   |                | 09/27/13 18:54 | 5       |
| Sulfate                             | 127    |           | 10.0 | 1.7  | mg/L |   |                | 09/27/13 18:54 | 5       |
| Alkalinity, Total                   | 521    |           | 100  | 40.0 | mg/L |   |                | 09/25/13 23:28 | 10      |

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### **Lab Chronicle**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-46482-1

Lab Sample ID: 480-46482-1

Matrix: Wastewater

Client Sample ID: Post-Carbon

Date Collected: 09/25/13 10:25 Date Received: 09/25/13 11:15

|           | Batch    | Batch         |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|---------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method        | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8260B         |     |          | 142633 | 10/04/13 05:29 | NQN     | TAL BUF |
| Total/NA  | Analysis | 8021B         |     | 1        | 141232 | 09/26/13 13:02 | DGB     | TAL BUF |
| Total/NA  | Prep     | 200.7         |     |          | 141216 | 09/26/13 08:35 | NMD2    | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |     | 1        | 141493 | 09/26/13 17:12 | AMH     | TAL BUF |
| Total/NA  | Analysis | SM 4500 H+ B  |     | 1        | 141173 | 09/25/13 19:21 | KS      | TAL BUF |
| Total/NA  | Prep     | Distill/CN    |     |          | 141780 | 09/30/13 02:06 | KWJ     | TAL BUF |
| Total/NA  | Analysis | 335.4         |     | 1        | 141947 | 09/30/13 22:28 | JME     | TAL BUF |

Client Sample ID: Pre-Carbon

Date Collected: 09/25/13 10:35

Date Received: 09/25/13 11:15

| Lab Sample ID: 480-46 | 483-1  |
|-----------------------|--------|
| Matrix: Wast          | ewater |
|                       |        |

| _         | Batch    | Batch         |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|---------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method        | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Prep     | 200.7         |     |          | 141216 | 09/26/13 08:35 | NMD2    | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |     | 1        | 141493 | 09/26/13 17:14 | AMH     | TAL BUF |
| Total/NA  | Analysis | 310.2         |     | 10       | 141198 | 09/25/13 23:28 | RMB     | TAL BUF |
| Total/NA  | Analysis | 300.0         |     | 5        | 141528 | 09/27/13 18:54 | KRC     | TAL BUF |

### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# **Certification Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-46482-1

## **Laboratory: TestAmerica Buffalo**

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority         | Program EPA Region |    | Certification ID | <b>Expiration Date</b> |  |  |
|-------------------|--------------------|----|------------------|------------------------|--|--|
| Arkansas DEQ      | State Program      | 6  | 88-0686          | 11-06-13               |  |  |
| California        | NELAP              | 9  | 1169CA           | 10-30-13               |  |  |
| Connecticut       | State Program      | 1  | PH-0568          | 09-30-14               |  |  |
| Florida           | NELAP              | 4  | E87672           | 06-30-14               |  |  |
| Georgia           | State Program      | 4  | N/A              | 03-31-14               |  |  |
| Ilinois           | NELAP              | 5  | 200003           | 10-30-13               |  |  |
| owa               | State Program      | 7  | 374              | 03-15-15               |  |  |
| Kansas            | NELAP              | 7  | E-10187          | 01-31-14               |  |  |
| Kentucky          | State Program      | 4  | 90029            | 12-31-13               |  |  |
| Kentucky (UST)    | State Program      | 4  | 30               | 04-01-14               |  |  |
| Louisiana         | NELAP              | 6  | 02031            | 06-30-14               |  |  |
| Maine             | State Program      | 1  | NY00044          | 12-04-14               |  |  |
| Maryland          | State Program      | 3  | 294              | 03-31-14               |  |  |
| Massachusetts     | State Program      | 1  | M-NY044          | 06-30-14               |  |  |
| Michigan          | State Program      | 5  | 9937             | 04-01-14               |  |  |
| Minnesota         | NELAP              | 5  | 036-999-337      | 12-31-13               |  |  |
| New Hampshire     | NELAP              | 1  | 2973             | 09-11-14               |  |  |
| New Jersey        | NELAP              | 2  | NY455            | 06-30-14               |  |  |
| New York          | NELAP              | 2  | 10026            | 04-01-14               |  |  |
| North Dakota      | State Program      | 8  | R-176            | 03-31-14               |  |  |
| Oklahoma          | State Program      | 6  | 9421             | 08-31-14               |  |  |
| Oregon            | NELAP              | 10 | NY200003         | 06-09-14               |  |  |
| Pennsylvania      | NELAP              | 3  | 68-00281         | 07-31-14               |  |  |
| Rhode Island      | State Program      | 1  | LAO00328         | 12-31-13               |  |  |
| Tennessee         | State Program      | 4  | TN02970          | 04-01-14               |  |  |
| Texas             | NELAP              | 6  | T104704412-11-2  | 07-31-14               |  |  |
| JSDA              | Federal            |    | P330-11-00386    | 11-22-14               |  |  |
| /irginia          | NELAP              | 3  | 460185           | 09-14-14               |  |  |
| Vashington        | State Program      | 10 | C784             | 02-10-14               |  |  |
| West Virginia DEP | State Program      | 3  | 252              | 12-31-13               |  |  |
| Wisconsin         | State Program      | 5  | 998310390        | 08-31-14               |  |  |

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# **Method Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-46482-1

| Method        | Method Description                 | Protocol | Laboratory |
|---------------|------------------------------------|----------|------------|
| 8260B         | Volatile Organic Compounds (GC/MS) | SW846    | TAL BUF    |
| 8021B         | Volatile Organic Compounds (GC)    | SW846    | TAL BUF    |
| 200.7 Rev 4.4 | Metals (ICP)                       | EPA      | TAL BUF    |
| 300.0         | Anions, Ion Chromatography         | MCAWW    | TAL BUF    |
| 310.2         | Alkalinity                         | MCAWW    | TAL BUF    |
| 335.4         | Cyanide, Total                     | MCAWW    | TAL BUF    |
| SM 4500 H+ B  | pH                                 | SM       | TAL BUF    |

### Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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TestAmerica Buffalo

# **Sample Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-46482-1

| Lab Sample ID | Client Sample ID | Matrix     | Collected      | Received       |
|---------------|------------------|------------|----------------|----------------|
| 480-46482-1   | Post-Carbon      | Wastewater | 09/25/13 10:25 | 09/25/13 11:15 |
| 480-46483-1   | Pre-Carbon       | Wastewater | 09/25/13 10:35 | 09/25/13 11:15 |

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### TestAmerica Buffalo

10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax **Chain of Custody Record**  <u>TestAmerica</u>

THE LEADER IN ENVIRONMENTAL TESTING

| Client Information   | Sampler: Lab PM: Fischer, Bri      |                |                     | rian I                           |                         |            |                         |                                       |                  | Carrier Tracking No(s): |           |          |          |         |         | COC No:<br>480-30387-1177.1 |  |   |  |
|--|------------------------------------|----------------|---------------------|----------------------------------|-------------------------|------------|-------------------------|---------------------------------------|------------------|-------------------------|-----------|----------|----------|---------|---------|-----------------------------|--|---|--|
| Client Contact:  | Phone: (VC/J) 27C a la (. E-Mai    |                |                     |                                  | ail:                    |            |                         |                                       |                  |                         |           | ┨        |          |         |         |                             |  | Page:   |  |
| Thomas Palmer Company:   |                                    |                |                     |                                  |                         | er@te      | estame                  |                                       |                  |                         |           | <u> </u> |          |         |         |                             |  | Page 1 of 1 Job #:  |  |
| Groundwater & Environmental Services Inc   |                                    |                |                     |                                  | <u> </u>                |            |                         |                                       | An               | alysi                   | s Re      | ques     | ted      |         |         |                             | _  | <u> </u>  |  |
| Address:<br>495 Aero Drive Suite 3   | Due Date Requested:                |                |                     |                                  |                         |            |                         |                                       |                  |                         |           |          |          |         |         |                             |  | Preservation Codes:  A - HCL M - Hexane                       |  |
| City:<br>Cheektowaga   | TAT Requested (days):              |                |                     |                                  |                         |            |                         |                                       |                  |                         |           |          |          |         |         |                             |  | B - NaOH N - None   |  |
| State, Zip:  | 10                                 |                |                     |                                  |                         |            |                         |                                       | -                |                         |           |          |          |         |         |                             |  | C - Zn Acetate  |  |
| NY, 14225<br>Phone:  | PO#:                               |                |                     |                                  |                         |            |                         |                                       |                  |                         |           |          |          |         |         |                             | E - NaHSO4 Q - Na2SO3<br>F - MeOH R - Na2S2SO3 |   |  |
| r none.  | Purchase Order                     | not requir     |                     |                                  | 2                       |            |                         | 8021                                  | -                |                         |           |          |          |         |         |                             |  | G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate |  |
| Email:<br>tpalmer@gesonline.com  | WO #:                              |                |                     |                                  | 0 3                     | 2          | 77                      | - A                                   |                  |                         |           |          |          |         |         |                             | و  | I - Ice U - Acetone<br>J - DI Water V - MCAA                  |  |
| Project Name:<br>NYSDEC - Gastown WWTP/Gastown Event Desc: Mthly Post-Ca                         | Project #:<br>48002525             |                |                     |                                  | e (Yes                  | 5          | list OLM04.2            | 8021B - (MOD) STARS List - VOA - 8021 |                  |                         |           |          |          |         |         |                             | containers                                     | K - EDTA W - ph 4-5<br>L - EDA Z - other (specify)            |  |
| Site:<br>New York  | SSOW#:                             |                |                     |                                  | Sample                  |            |                         | FARS                                  | Total            |                         |           |          |          |         |         |                             | of con   | Other:  |  |
| HOW TORK   |                                    |                | Sample              | Matrix                           | S ber                   | E          | 8260B - (MOD) TCL       | s (ac                                 | nide,            | SM4500_H+ - pH          |           |          |          |         |         |                             |  |   |  |
|  |                                    |                | Туре                | (W=water,<br>S=solid,            | Filte                   | - Fo       | Ě.                      | <u>\$</u>                             | 335.4 - Cyanide, | 90                      |           |          |          |         |         |                             | Total Number                                   |   |  |
| Sample Identification  | Sample Date                        | Sample<br>Time | (C=comp,<br>G=grab) | O=waste/oil,<br>BT=Tissue, A=Air | ) I                     | 200.7      | 82601                   | 80211                                 | 335.4            | SM45                    |           |          |          |         |         |                             | Tota   | Special Instructions/Note:                                    |  |
|  | ><                                 | $\geq <$       | Preserva            | tion Code:                       | $\bowtie$               | <b>√</b> □ | Α                       | A E                                   | 3 I              | N                       |           |          |          |         | 1 2     |                             | X  |   |  |
| Post-Carbon  | 9.25.13                            | 1025           | G                   | Water                            | Ш                       |            |                         |                                       |                  |                         |           |          |          |         |         |                             |  |   |  |
|  |                                    |                |                     |                                  |                         |            |                         |                                       |                  |                         |           |          |          |         |         |                             |  |   |  |
|  |                                    |                |                     |                                  | $\sqcap$                | -          |                         |                                       | ٦                |                         |           |          |          |         |         |                             | - 17   |   |  |
|  |                                    |                |                     |                                  | Ħ                       | +          |                         | $\Box$                                | 1                | $\top$                  | $\top$    |          |          | $\top$  |         |                             | 1  |   |  |
|  |                                    |                |                     |                                  | H                       | +          | $\dagger$               |                                       | $\dashv$         | $^+$                    | +         | +        | $\vdash$ | +       | +       |                             |  |   |  |
|  |                                    |                |                     |                                  | H                       | +          | ╁                       | $\vdash$                              | +                | +                       | +         |          | $\vdash$ | +       | +       |                             |  |   |  |
|  |                                    |                |                     |                                  | ₩                       | +          | $\vdash$                |                                       | +                |                         | +         |          | $\vdash$ | +       | +-      |                             |  |   |  |
|  |                                    |                |                     |                                  | ++                      | +          | $\vdash$                | $\vdash$                              | $\dashv$         | +                       | +         | _        | -        | +       | +       | _                           |  |   |  |
|  |                                    |                |                     |                                  | 11                      | _          |                         |                                       | _                | $\perp$                 |           |          | Ц.       | _       |         |                             | 22   |   |  |
|  |                                    |                |                     |                                  | Ш                       | $\bot$     |                         | Ш                                     | $\perp$          |                         |           |          |          | $\perp$ | $\perp$ |                             | -5.7   |   |  |
|  |                                    |                |                     |                                  | Ш                       |            |                         |                                       |                  |                         |           |          |          |         |         |                             |  |   |  |
|  |                                    |                |                     |                                  | Ш                       | T          |                         |                                       |                  |                         |           |          |          |         |         |                             |  |   |  |
| Possible Hazard Identification   |                                    |                | '                   |                                  | 5                       | _          | -                       |                                       |                  | ee ma                   |           |          |          | -       |         |                             |  | longer than 1 month)  |  |
| Non-Hazard Flammable Skin Irritant Poison Deliverable Requested: I, II, III, IV, Other (specify) | B Unknow                           | n Rad          | liological          |                                  |                         |            |                         | To Cl                                 |                  | Regu                    |           |          | al By L  | ab      |         | Arc                         | hive   | e For Months  |  |
|  |                                    |                |                     |                                  |                         |            | rinsui                  | uctions                               | <i>-</i>         | ricqu                   | ii CitiCi | 11.3.    | I        | -405    |         |                             |  |   |  |
| Empty Kit Relinquished by:  Date:  Time:   |                                    |                |                     |                                  |                         |            |                         |                                       |                  | Method                  |           |          |          |         | Company |                             |  |   |  |
| Relinquished by: Usw lill  | Date/Time: 9 75/3 1115 Company GCS |                |                     |                                  | Received by: Date/Time: |            |                         |                                       |                  |                         |           |          |          |         |         |                             |  |   |  |
| Relinquished by:   | Date/Time:                         |                |                     | Company                          |                         | Red        | Received by: Date/Time: |                                       |                  |                         |           |          |          | Company |         |                             |  |   |  |
| Relinquished by:   | Date/Time: Company                 |                |                     | Received by: Date/Time: Company  |                         |            |                         |                                       |                  |                         | Company   |          |          |         |         |                             |  |   |  |
| Custody Seals Intact: Custody Seal No.: Δ Yes Δ No   |                                    |                |                     |                                  | Cod                     | oler Ter   | nperatu                 | re(s)                                 | °C and           | Other R                 | Remarks   | :        | #        | 2       | 3.      | 4                           |  |   |  |









### TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

### **Chain of Custody Record**



Phone (716) 691-2600 Fax (716) 691-7991 Lab PM: Carrier Tracking No(s): Fischer, Brian J Client Information 480-30378-1176.1 Client Contact Phone (484) 325-0206 Page: Thomas Palmer brian.fischer@testamericainc.com Page 1 of 1 Job #: **Analysis Requested** Groundwater & Environmental Services Inc Address: Due Date Requested: Preservation Codes: 495 Aero Drive Suite 3 M - Hexane TAT Requested (days): B - NaOH N - None Cheektowaga C - Zn Acetate O - AsNaO2 10 State, Zip: D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 NY, 14225 F - MeOH R - Na2S2SO3 Phone: PO #. G - Amchior S - H2SO4 Purchase Order not requir T - TSP Dodecahydrate H - Ascorbic Acid 1 - Ice U - Acetone Perform MS/MSD (Yes or No) J - DI Water V - MCAA 300.0\_28D - (MOD) Local Method tpalmer@gesonline.com K - EDTA W - ph 4-5 Project Name. Project # 200.7 - (MOD) Local Method L - EDA Z - other (specify) NYSDEC - Gastown WWTP/Gastown Event Desc: Mthly Pre-Car 48002525 Other: New York Total Number of Matrix Sample (W≍water, Type S=solld, Sample (C≈comp, Sample Identification Sample Date Time G=grab) BT=Tissue, A=Air) Special Instructions/Note: Preservation Code: D 9.25-13 1035 Pre-Carbon Ŀ Water Possible Hazard Identification Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological Return To Client Disposal By Lab Archive For Months Deliverable Requested: I, II, III, IV, Other (specify) Special Instructions/QC Requirements: Empty Kit Relinquished by Date: Method of Shipment: Time: Date/Time 9 -25 - 13 Company 1115 GEZ  $GL_{2}$ lhim Relinguished by Date/Time Received by Company Relinquished by Date/Time Company Received by. Date/Time Company Custody Seals Intact: Custody Seal No. Cooler Temperature(s) °C and Other Remarks Δ Yes Δ No

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### **Login Sample Receipt Checklist**

Client: New York State D.E.C. Job Number: 480-46482-1

Login Number: 46482 List Source: TestAmerica Buffalo

List Number: 1

Creator: Stau, Brandon M

| Question   | Answer | Comment |
|--|--------|---------|
| Radioactivity either was not measured or, if measured, is at or below background | True   |         |
| The cooler's custody seal, if present, is intact.                                | True   |         |
| The cooler or samples do not appear to have been compromised or ampered with.    | True   |         |
| Samples were received on ice.  | True   |         |
| Cooler Temperature is acceptable.  | True   |         |
| Cooler Temperature is recorded.  | True   |         |
| COC is present.  | True   |         |
| COC is filled out in ink and legible.  | True   |         |
| COC is filled out with all pertinent information.                                | True   |         |
| s the Field Sampler's name present on COC?                                       | True   |         |
| There are no discrepancies between the sample IDs on the containers and he COC.  | True   |         |
| Samples are received within Holding Time.  | True   |         |
| Sample containers have legible labels.   | True   |         |
| Containers are not broken or leaking.  | True   |         |
| Sample collection date/times are provided.                                       | True   |         |
| Appropriate sample containers are used.  | True   |         |
| Sample bottles are completely filled.  | True   |         |
| Sample Preservation Verified   | True   |         |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |         |
| /OA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | True   |         |
| f necessary, staff have been informed of any short hold time or quick TAT needs  | True   |         |
| Multiphasic samples are not present.   | True   |         |
| Samples do not require splitting or compositing.                                 | True   |         |
| Sampling Company provided.   | True   | ges     |
| Samples received within 48 hours of sampling.                                    | True   |         |
| Samples requiring field filtration have been filtered in the field.              | N/A    |         |
| Chlorine Residual checked.   | N/A    |         |

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### **Login Sample Receipt Checklist**

Client: New York State D.E.C. Job Number: 480-46482-1

Login Number: 46483 List Source: TestAmerica Buffalo

List Number: 1

Creator: Robison, Zachary J

| ordator. Robboon, Edonary o  |        |         |
|--|--------|---------|
| Question   | Answer | Comment |
| Radioactivity either was not measured or, if measured, is at or below background | True   |         |
| The cooler's custody seal, if present, is intact.                                | True   |         |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |         |
| Samples were received on ice.  | True   |         |
| Cooler Temperature is acceptable.  | True   |         |
| Cooler Temperature is recorded.  | True   |         |
| COC is present.  | True   |         |
| COC is filled out in ink and legible.  | True   |         |
| COC is filled out with all pertinent information.                                | True   |         |
| Is the Field Sampler's name present on COC?                                      | True   |         |
| There are no discrepancies between the sample IDs on the containers and the COC. | True   |         |
| Samples are received within Holding Time.  | True   |         |
| Sample containers have legible labels.   | True   |         |
| Containers are not broken or leaking.  | True   |         |
| Sample collection date/times are provided.                                       | True   |         |
| Appropriate sample containers are used.  | True   |         |
| Sample bottles are completely filled.  | True   |         |
| Sample Preservation Verified   | True   |         |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |         |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | True   |         |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True   |         |
| Multiphasic samples are not present.   | True   |         |
| Samples do not require splitting or compositing.                                 | True   |         |
| Sampling Company provided.   | True   | GES     |
| Samples received within 48 hours of sampling.                                    | True   |         |
| Samples requiring field filtration have been filtered in the field.              | N/A    |         |
| Chlorine Residual checked.   | N/A    |         |
|  |        |         |

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THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo 10 Hazelwood Drive Amherst, NY 14228-2298 Tel: (716)691-2600

TestAmerica Job ID: 480-48789-1

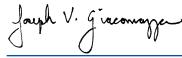
Client Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Sampling Event: Mthly Pre-Carbon

### For:

New York State D.E.C. 270 Michigan Avenue Buffalo, New York 14203

Attn: Mr. Glenn May



Authorized for release by: 11/8/2013 4:07:16 PM Joe Giacomazza, Project Administrator joe.giacomazza@testamericainc.com

Designee for

Brian Fischer, Project Manager II (716)504-9835 brian.fischer@testamericainc.com

.....LINKS .....

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**Have a Question?** 



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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Joseph V. gircomogger

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Joe Giacomazza Project Administrator

11/8/2013 4:07:16 PM

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

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### **Definitions/Glossary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-48789-1

### **Qualifiers**

### **GC VOA**

| Qualifier | Qualifier Description  |
|-----------|--|
| J         | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### **General Chemistry**

| Qualifier | Qualifier Description                             |
|-----------|---|
| HF        | Field parameter with a holding time of 15 minutes |

### **Glossary**

| Abbassistisa   |   |
|----------------|---|
| Abbreviation   | These commonly used abbreviations may or may not be present in this report.                                 |
| ¤              | Listed under the "D" column to designate that the result is reported on a dry weight basis                  |
| %R             | Percent Recovery  |
| CNF            | Contains no Free Liquid   |
| DER            | Duplicate error ratio (normalized absolute difference)  |
| Dil Fac        | Dilution Factor   |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC            | Decision level concentration  |
|                |   |

| DLC | Decision level concentration     |
|-----|----------------------------------|
| MDA | Minimum detectable activity      |
| EDL | Estimated Detection Limit        |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit           |
|     |                                  |

| IVIDO | Willing a celectable concern |
|-------|------------------------------|
| MDL   | Method Detection Limit       |
| ML    | Minimum Level (Dioxin)       |
| NC    | Not Calculated               |
|       |                              |

| PQL | Practical Quantitation Limit |
|-----|------------------------------|
|     |                              |

| QC  | Quality Control       |
|-----|-----------------------|
| RER | Relative error ration |

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

### **Case Narrative**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-48789-1

Job ID: 480-48789-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-48789-1

#### Receipt

The samples were received on 10/25/2013 5:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt time was 3.6° C.

#### GC/MS VOA

No analytical or quality issues were noted.

### Ion Chromatography

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-48789-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

#### GC VOA

Method(s) 8021B: The following sample was diluted to bring the concentration of target analytes within the calibration range: (480-48791-3 MS), (480-48791-3 MSD), Post-Carbon #1 (480-48791-3). Elevated reporting limits (RLs) are provided.

Method(s) 8021B: The following samples were diluted to bring the concentration of target analytes within the calibration range: Building Sump (480-48789-2), Pre-Carbon (480-48789-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

#### Metals

No analytical or quality issues were noted.

### **General Chemistry**

Method(s) SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample(s) has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Post-Carbon #3 (480-48791-1)

No other analytical or quality issues were noted.

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Client: New York State D.E.C.

Date Collected: 10/25/13 10:50

Date Received: 10/25/13 17:00

**Client Sample ID: Pre-Carbon** 

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Method: 8021B - Volatile Organic Compounds (GC)

TestAmerica Job ID: 480-48789-1

Lab Sample ID: 480-48789-1

**Matrix: Wastewater** 

| Prepared | Analyzed       | Dil Fac |   |
|----------|----------------|---------|---|
|          | 10/31/13 11:07 | 5       | Π |
|          | 10/31/13 11:07 | 5       |   |
|          | 10/31/13 11:07 | 5       |   |
|          | 10/31/13 11:07 | 5       |   |
|          | 10/31/13 11:07 | 5       |   |
|          |                |         |   |

| 1,2,4-Trimethylbenzene  | 24  | 1.0 | 0.17 ug/L | 10/31/13 11:07 | 5 |
|-------------------------|-----|-----|-----------|----------------|---|
| 1,3,5-Trimethylbenzene  | 7.2 | 1.0 | 0.75 ug/L | 10/31/13 11:07 | 5 |
| Isopropylbenzene        | 2.5 | 1.0 | 0.14 ug/L | 10/31/13 11:07 | 5 |
| Methyl tert-butyl ether | 17  | 2.0 | 0.22 ug/L | 10/31/13 11:07 | 5 |
| m,p-Xylene              | 210 | 2.0 | 0.27 ug/L | 10/31/13 11:07 | 5 |
| n-Butylbenzene          | ND  | 1.0 | 0.15 ug/L | 10/31/13 11:07 | 5 |
| n-Propylbenzene         | ND  | 1.0 | 0.65 ug/L | 10/31/13 11:07 | 5 |
| o-Xylene                | 110 | 1.0 | 0.14 ug/L | 10/31/13 11:07 | 5 |
| p-Cymene                | ND  | 1.0 | 0.15 ug/L | 10/31/13 11:07 | 5 |
| sec-Butylbenzene        | ND  | 1.0 | 0.10 ug/L | 10/31/13 11:07 | 5 |
| Xylenes, Total          | 320 | 3.0 | 0.27 ug/L | 10/31/13 11:07 | 5 |
|                         |     |     |           |                |   |

RL

MDL Unit

| Surrogate              | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------|-----------|-----------|----------|----------|----------------|---------|
| a,a,a-Trifluorotoluene | 99        |           | 63 - 145 |          | 10/31/13 11:07 | 5       |
| 4-Bromofluorobenzene   | 99        |           | 64 - 141 |          | 10/31/13 11:07 | 5       |

| Method: 8021B - Volatile Organic Compounds (GC) - DL |        |           |    |     |      |   |          |                |         |
|--|--------|-----------|----|-----|------|---|----------|----------------|---------|
| Analyte  | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed       | Dil Fac |
| Benzene  | 4200   |           | 20 | 2.3 | ug/L |   |          | 10/31/13 13:30 | 100     |
| Ethylbenzene   | 350    |           | 20 | 2.9 | ug/L |   |          | 10/31/13 13:30 | 100     |
| Toluene  | 1300   |           | 20 | 3.6 | ug/L |   |          | 10/31/13 13:30 | 100     |
|  |        |           |    |     |      |   |          |                |         |

| Surrogate              | %Recovery | Qualifier | Limits   | Prepai | red | Analyzed       | Dil Fac |
|------------------------|-----------|-----------|----------|--------|-----|----------------|---------|
| a,a,a-Trifluorotoluene | 102       |           | 63 - 145 |        |     | 10/31/13 13:30 | 100     |
| 4-Bromofluorobenzene   | 105       |           | 64 - 141 |        |     | 10/31/13 13:30 | 100     |

| Method: 200.7 Rev 4.4 - M | etals (ICP) |           |      |      | Method: 200.7 Rev 4.4 - Metals (ICP) |   |                |                |         |  |  |  |  |  |
|---------------------------|-------------|-----------|------|------|--------------------------------------|---|----------------|----------------|---------|--|--|--|--|--|
| Analyte                   | Result      | Qualifier | RL   | MDL  | Unit                                 | D | Prepared       | Analyzed       | Dil Fac |  |  |  |  |  |
| Calcium                   | 129000      |           | 500  | 100  | ug/L                                 |   | 10/28/13 08:20 | 10/31/13 00:05 | 1       |  |  |  |  |  |
| Iron                      | 882         |           | 50.0 | 19.3 | ug/L                                 |   | 10/28/13 08:20 | 10/31/13 16:21 | 1       |  |  |  |  |  |
| Magnesium                 | 77200       |           | 200  | 43.4 | ug/L                                 |   | 10/28/13 08:20 | 10/31/13 00:05 | 1       |  |  |  |  |  |
| Potassium                 | 5980        |           | 500  | 100  | ug/L                                 |   | 10/28/13 08:20 | 10/31/13 00:05 | 1       |  |  |  |  |  |
| Sodium                    | 75300       |           | 1000 | 324  | ug/L                                 |   | 10/28/13 08:20 | 10/31/13 00:05 | 1       |  |  |  |  |  |

| General Chemistry |            |            |      |      |   |          |                |         |
|-------------------|------------|------------|------|------|---|----------|----------------|---------|
| Analyte           | Result Qua | alifier RL | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
| Chloride          | 109        | 2.5        | 1.4  | mg/L |   |          | 10/29/13 20:20 | 5       |
| Sulfate           | 154        | 10.0       | 1.7  | mg/L |   |          | 10/29/13 20:20 | 5       |
| Alkalinity, Total | 583        | 100        | 40.0 | mg/L |   |          | 10/31/13 14:53 | 10      |

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-48789-1

Lab Sample ID: 480-48789-2

Matrix: Water

**Client Sample ID: Building Sump** 

Date Collected: 10/25/13 11:00 Date Received: 10/25/13 17:00

| Analyte                       | Result           | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------------|------------------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,2,4-Trimethylbenzene        | 99               |           | 1.0      | 0.17 | ug/L |   |          | 10/31/13 12:35 | 5       |
| 1,3,5-Trimethylbenzene        | 29               |           | 1.0      | 0.75 | ug/L |   |          | 10/31/13 12:35 | 5       |
| Isopropylbenzene              | 16               |           | 1.0      | 0.14 | ug/L |   |          | 10/31/13 12:35 | 5       |
| Methyl tert-butyl ether       | ND               |           | 2.0      | 0.22 | ug/L |   |          | 10/31/13 12:35 | 5       |
| n-Butylbenzene                | ND               |           | 1.0      | 0.15 | ug/L |   |          | 10/31/13 12:35 | 5       |
| n-Propylbenzene               | 4.1              |           | 1.0      | 0.65 | ug/L |   |          | 10/31/13 12:35 | 5       |
| p-Cymene                      | ND               |           | 1.0      | 0.15 | ug/L |   |          | 10/31/13 12:35 | 5       |
| sec-Butylbenzene              | ND               |           | 1.0      | 0.10 | ug/L |   |          | 10/31/13 12:35 | 5       |
| Xylenes, Total                | 1300             |           | 3.0      | 0.27 | ug/L |   |          | 10/31/13 12:35 | 5       |
| Surrogate                     | %Recovery        | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene        | 101              |           | 63 - 145 |      |      | _ |          | 10/31/13 12:35 | 5       |
| 4-Bromofluorobenzene          | 102              |           | 64 - 141 |      |      |   |          | 10/31/13 12:35 | 5       |
| Method: 8021B - Volatile Orga | anic Compounds ( | (GC) - DI |          |      |      |   |          |                |         |
| Analyte                       |                  | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |

|                              |           |           | ** ***   |     |      |   |          |                | _       |
|------------------------------|-----------|-----------|----------|-----|------|---|----------|----------------|---------|
| Method: 8021B - Volatile Org | •         | • ,       |          |     |      |   |          |                |         |
| Analyte                      | Result    | Qualifier | RL       | MDL | Unit | D | Prepared | Analyzed       | Dil Fac |
| Benzene                      | 15000     |           | 100      | 12  | ug/L |   |          | 10/31/13 15:29 | 500     |
| Ethylbenzene                 | 1900      |           | 100      | 14  | ug/L |   |          | 10/31/13 15:29 | 500     |
| m,p-Xylene                   | 860       |           | 200      | 27  | ug/L |   |          | 10/31/13 15:29 | 500     |
| o-Xylene                     | ND        |           | 100      | 14  | ug/L |   |          | 10/31/13 15:29 | 500     |
| Toluene                      | 6400      |           | 100      | 18  | ug/L |   |          | 10/31/13 15:29 | 500     |
| Surrogate                    | %Recovery | Qualifier | Limits   |     |      |   | Prepared | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene       | 100       |           | 63 - 145 |     |      | _ |          | 10/31/13 15:29 | 500     |
| 4-Bromofluorobenzene         | 100       |           | 64 - 141 |     |      |   |          | 10/31/13 15:29 | 500     |
|                              |           |           |          |     |      |   |          |                |         |

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Client Sample ID: Post-Carbon #3

Date Collected: 10/25/13 10:30 Date Received: 10/25/13 17:00 Lab Sample ID: 480-48791-1

**Matrix: Wastewater** 

| Analyte                     | Result Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|------------------|-----|------|------|---|----------|----------------|---------|
| 1,1,1-Trichloroethane       | ND ND            | 1.0 | 0.82 | ug/L |   |          | 11/05/13 11:16 | 1       |
| 1,1,2,2-Tetrachloroethane   | ND               | 1.0 | 0.21 | ug/L |   |          | 11/05/13 11:16 | 1       |
| 1,1,2-Trichloroethane       | ND               | 1.0 | 0.23 | ug/L |   |          | 11/05/13 11:16 | 1       |
| 1,1-Dichloroethane          | ND               | 1.0 | 0.38 | ug/L |   |          | 11/05/13 11:16 | 1       |
| 1,1-Dichloroethene          | ND               | 1.0 | 0.29 | ug/L |   |          | 11/05/13 11:16 | 1       |
| 1,2-Dichloroethane          | ND               | 1.0 | 0.21 | ug/L |   |          | 11/05/13 11:16 | 1       |
| 1,2-Dichloroethene, Total   | ND               | 2.0 | 0.70 | ug/L |   |          | 11/05/13 11:16 | 1       |
| 1,2-Dichloropropane         | ND               | 1.0 | 0.72 | ug/L |   |          | 11/05/13 11:16 | 1       |
| 2-Hexanone                  | ND               | 5.0 | 1.2  | ug/L |   |          | 11/05/13 11:16 | 1       |
| 2-Butanone (MEK)            | ND               | 10  | 1.3  | ug/L |   |          | 11/05/13 11:16 | 1       |
| 4-Methyl-2-pentanone (MIBK) | ND               | 5.0 | 2.1  | ug/L |   |          | 11/05/13 11:16 | 1       |
| Acetone                     | ND               | 10  | 3.0  | ug/L |   |          | 11/05/13 11:16 | 1       |
| Benzene                     | ND               | 1.0 | 0.41 | ug/L |   |          | 11/05/13 11:16 | 1       |
| Bromodichloromethane        | ND               | 1.0 | 0.39 | ug/L |   |          | 11/05/13 11:16 | 1       |
| Bromoform                   | ND               | 1.0 | 0.26 | ug/L |   |          | 11/05/13 11:16 | 1       |
| Bromomethane                | ND               | 1.0 | 0.69 | ug/L |   |          | 11/05/13 11:16 | 1       |
| Carbon disulfide            | ND               | 1.0 | 0.19 | ug/L |   |          | 11/05/13 11:16 | 1       |
| Carbon tetrachloride        | ND               | 1.0 | 0.27 | ug/L |   |          | 11/05/13 11:16 | 1       |
| Chlorobenzene               | ND               | 1.0 | 0.75 | ug/L |   |          | 11/05/13 11:16 | 1       |
| Dibromochloromethane        | ND               | 1.0 | 0.32 | ug/L |   |          | 11/05/13 11:16 | 1       |
| Chloroethane                | ND               | 1.0 | 0.32 | ug/L |   |          | 11/05/13 11:16 | 1       |
| Chloroform                  | ND               | 1.0 | 0.34 | ug/L |   |          | 11/05/13 11:16 | 1       |
| Chloromethane               | ND               | 1.0 | 0.35 | ug/L |   |          | 11/05/13 11:16 | 1       |
| cis-1,3-Dichloropropene     | ND               | 1.0 | 0.36 | ug/L |   |          | 11/05/13 11:16 | 1       |
| Ethylbenzene                | ND               | 1.0 | 0.74 | ug/L |   |          | 11/05/13 11:16 | 1       |
| Methylene Chloride          | ND               | 1.0 | 0.44 | ug/L |   |          | 11/05/13 11:16 | 1       |
| Styrene                     | ND               | 1.0 | 0.73 | ug/L |   |          | 11/05/13 11:16 | 1       |
| Tetrachloroethene           | ND               | 1.0 | 0.36 | ug/L |   |          | 11/05/13 11:16 | 1       |
| Toluene                     | ND               | 1.0 | 0.51 | ug/L |   |          | 11/05/13 11:16 | 1       |
| trans-1,3-Dichloropropene   | ND               | 1.0 |      | ug/L |   |          | 11/05/13 11:16 | 1       |
| Trichloroethene             | ND               | 1.0 | 0.46 | ug/L |   |          | 11/05/13 11:16 | 1       |
| Vinyl chloride              | ND               | 1.0 |      | ug/L |   |          | 11/05/13 11:16 | 1       |
| Vinyl acetate               | ND               | 5.0 |      | ug/L |   |          | 11/05/13 11:16 | 1       |
| Xylenes, Total              | ND               | 2.0 |      | ug/L |   |          | 11/05/13 11:16 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 104       |           | 66 - 137 |          | 11/05/13 11:16 | 1       |
| Toluene-d8 (Surr)            | 104       |           | 71 - 126 |          | 11/05/13 11:16 | 1       |
| 4-Bromofluorobenzene (Surr)  | 110       |           | 73 - 120 |          | 11/05/13 11:16 | 1       |

| Mathadi 0004D   | Valatila Organia | Commounds (CC) |
|-----------------|------------------|----------------|
| Wetnod: 8021B - | volatile Organic | Compounds (GC) |

| motification volutile orga   | illo compoundo ( | ,00,      |      |       |      |   |          |                |         |
|--|------------------|-----------|------|-------|------|---|----------|----------------|---------|
| Analyte  | Result           | Qualifier | RL   | MDL   | Unit | D | Prepared | Analyzed       | Dil Fac |
| 1,2,4-Trimethylbenzene   | ND               |           | 0.20 | 0.035 | ug/L |   |          | 10/31/13 16:38 | 1       |
| 1,3,5-Trimethylbenzene   | ND               |           | 0.20 | 0.15  | ug/L |   |          | 10/31/13 16:38 | 1       |
| Benzene  | ND               |           | 0.20 | 0.023 | ug/L |   |          | 10/31/13 16:38 | 1       |
| Ethylbenzene   | ND               |           | 0.20 | 0.029 | ug/L |   |          | 10/31/13 16:38 | 1       |
| Isopropylbenzene   | ND               |           | 0.20 | 0.027 | ug/L |   |          | 10/31/13 16:38 | 1       |
| Methyl tert-butyl ether  | ND               |           | 0.40 | 0.044 | ug/L |   |          | 10/31/13 16:38 | 1       |
| m,p-Xylene   | ND               |           | 0.40 | 0.054 | ug/L |   |          | 10/31/13 16:38 | 1       |
| n-Butylbenzene   | ND               |           | 0.20 | 0.031 | ug/L |   |          | 10/31/13 16:38 | 1       |
| The state of the s |                  |           |      |       |      |   |          |                |         |

TestAmerica Buffalo

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11/8/2013

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-48789-1

Lab Sample ID: 480-48791-1

**Matrix: Wastewater** 

| Client Sample II | ): Post-Carbon #3 |
|------------------|-------------------|
| •                |                   |

Date Collected: 10/25/13 10:30 Date Received: 10/25/13 17:00

| Analyte                | Result    | Qualifier | RL       | MDL   | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------|-----------|-----------|----------|-------|------|---|----------|----------------|---------|
| n-Propylbenzene        | ND        |           | 0.20     | 0.13  | ug/L |   |          | 10/31/13 16:38 | 1       |
| o-Xylene               | ND        |           | 0.20     | 0.027 | ug/L |   |          | 10/31/13 16:38 | 1       |
| p-Cymene               | ND        |           | 0.20     | 0.030 | ug/L |   |          | 10/31/13 16:38 | 1       |
| sec-Butylbenzene       | ND        |           | 0.20     | 0.020 | ug/L |   |          | 10/31/13 16:38 | 1       |
| Toluene                | ND        |           | 0.20     | 0.036 | ug/L |   |          | 10/31/13 16:38 | 1       |
| Xylenes, Total         | ND        |           | 0.60     | 0.054 | ug/L |   |          | 10/31/13 16:38 | 1       |
| Surrogate              | %Recovery | Qualifier | Limits   |       |      |   | Prepared | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene | 97        |           | 63 - 145 |       |      | - |          | 10/31/13 16:38 | 1       |
| 4-Bromofluorobenzene   | 98        |           | 64 - 141 |       |      |   |          | 10/31/13 16:38 | 1       |

| Analyte | Result | Qualifier | RL   | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
|---------|--------|-----------|------|------|------|---|----------------|----------------|---------|
| Iron    | 174    |           | 50.0 | 19.3 | ug/L |   | 10/28/13 08:20 | 10/31/13 16:24 | 1       |
| Γ       |        |           |      |      |      |   |                |                |         |

| General Chemistry  Analyte | Result | Qualifier | RL    | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
|----------------------------|--------|-----------|-------|--------|------|---|----------------|----------------|---------|
| Cyanide, Total             | 0.35   |           | 0.010 | 0.0050 | mg/L |   | 10/29/13 15:32 | 10/31/13 13:22 | 1       |
| Analyte                    | Result | Qualifier | RL    | RL     | Unit | D | Prepared       | Analyzed       | Dil Fac |
| рН                         | 7.00   | HF        | 0.100 | 0.100  | SU   |   |                | 10/28/13 14:28 | 1       |

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-48789-1

Lab Sample ID: 480-48791-2

**Matrix: Wastewater** 

Client Sample ID: Post-Carbon #2

Date Collected: 10/25/13 10:35 Date Received: 10/25/13 17:00

| Analyte                 | Result    | Qualifier | RL       | MDL   | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------|-----------|-----------|----------|-------|------|---|----------|----------------|---------|
| 1,2,4-Trimethylbenzene  | ND        |           | 0.20     | 0.035 | ug/L |   |          | 10/31/13 17:12 | 1       |
| 1,3,5-Trimethylbenzene  | ND        |           | 0.20     | 0.15  | ug/L |   |          | 10/31/13 17:12 | 1       |
| Benzene                 | 2.2       |           | 0.20     | 0.023 | ug/L |   |          | 10/31/13 17:12 | 1       |
| Ethylbenzene            | ND        |           | 0.20     | 0.029 | ug/L |   |          | 10/31/13 17:12 | 1       |
| Isopropylbenzene        | ND        |           | 0.20     | 0.027 | ug/L |   |          | 10/31/13 17:12 | 1       |
| Methyl tert-butyl ether | ND        |           | 0.40     | 0.044 | ug/L |   |          | 10/31/13 17:12 | 1       |
| m,p-Xylene              | ND        |           | 0.40     | 0.054 | ug/L |   |          | 10/31/13 17:12 | 1       |
| n-Butylbenzene          | ND        |           | 0.20     | 0.031 | ug/L |   |          | 10/31/13 17:12 | 1       |
| n-Propylbenzene         | ND        |           | 0.20     | 0.13  | ug/L |   |          | 10/31/13 17:12 | 1       |
| o-Xylene                | ND        |           | 0.20     | 0.027 | ug/L |   |          | 10/31/13 17:12 | 1       |
| p-Cymene                | ND        |           | 0.20     | 0.030 | ug/L |   |          | 10/31/13 17:12 | 1       |
| sec-Butylbenzene        | ND        |           | 0.20     | 0.020 | ug/L |   |          | 10/31/13 17:12 | 1       |
| Toluene                 | 0.12      | J         | 0.20     | 0.036 | ug/L |   |          | 10/31/13 17:12 | 1       |
| Xylenes, Total          | ND        |           | 0.60     | 0.054 | ug/L |   |          | 10/31/13 17:12 | 1       |
| Surrogate               | %Recovery | Qualifier | Limits   |       |      |   | Prepared | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene  | 98        |           | 63 - 145 |       |      | - |          | 10/31/13 17:12 | 1       |
| 4-Bromofluorobenzene    | 99        |           | 64 - 141 |       |      |   |          | 10/31/13 17:12 | 1       |

TestAmerica Buffalo

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Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-48789-1

Lab Sample ID: 480-48791-3

10/31/13 17:46

Matrix: Water

Date Collected: 10/25/13 10:40 Date Received: 10/25/13 17:00

4-Bromofluorobenzene

Client Sample ID: Post-Carbon #1

| Method: 8021B - Volatile Org<br>Analyte | •         | Qualifier | RL       | MDL   | Unit | D | Prepared | Analyzed       | Dil Fac |
|---|-----------|-----------|----------|-------|------|---|----------|----------------|---------|
| 1,2,4-Trimethylbenzene                  | 0.32      |           | 0.20     | 0.035 | ug/L |   |          | 10/31/13 17:46 | 1       |
| 1,3,5-Trimethylbenzene                  | ND        |           | 0.20     | 0.15  | ug/L |   |          | 10/31/13 17:46 | 1       |
| Ethylbenzene                            | 3.5       |           | 0.20     | 0.029 | ug/L |   |          | 10/31/13 17:46 | 1       |
| Isopropylbenzene                        | ND        |           | 0.20     | 0.027 | ug/L |   |          | 10/31/13 17:46 | 1       |
| Methyl tert-butyl ether                 | 1.9       |           | 0.40     | 0.044 | ug/L |   |          | 10/31/13 17:46 | 1       |
| m,p-Xylene                              | 3.4       |           | 0.40     | 0.054 | ug/L |   |          | 10/31/13 17:46 | 1       |
| n-Butylbenzene                          | ND        |           | 0.20     | 0.031 | ug/L |   |          | 10/31/13 17:46 | 1       |
| n-Propylbenzene                         | ND        |           | 0.20     | 0.13  | ug/L |   |          | 10/31/13 17:46 | 1       |
| o-Xylene                                | 2.0       |           | 0.20     | 0.027 | ug/L |   |          | 10/31/13 17:46 | 1       |
| p-Cymene                                | ND        |           | 0.20     | 0.030 | ug/L |   |          | 10/31/13 17:46 | 1       |
| sec-Butylbenzene                        | ND        |           | 0.20     | 0.020 | ug/L |   |          | 10/31/13 17:46 | 1       |
| Toluene                                 | 27        |           | 0.20     | 0.036 | ug/L |   |          | 10/31/13 17:46 | 1       |
| Xylenes, Total                          | 5.4       |           | 0.60     | 0.054 | ug/L |   |          | 10/31/13 17:46 | 1       |
| Surrogate                               | %Recovery | Qualifier | Limits   |       |      |   | Prepared | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene                  | 96        |           | 63 - 145 |       |      | - |          | 10/31/13 17:46 | 1       |

| Analyte                | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| Benzene                | 250       |           | 2.0      | 0.23 | ug/L |   |          | 11/01/13 10:05 | 10      |
| Surrogate              | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene | 100       |           | 63 - 145 |      |      | - |          | 11/01/13 10:05 | 10      |
|                        |           |           |          |      |      |   |          |                |         |

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TestAmerica Buffalo

TestAmerica Job ID: 480-48789-1

Client Sample ID: Pre-Carbon

Date Collected: 10/25/13 10:50 Date Received: 10/25/13 17:00 Lab Sample ID: 480-48789-1

Matrix: Wastewater

|           | Batch    | Batch         |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|---------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Туре     | Method        | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8021B         |     |          | 148842 | 10/31/13 11:07 | DGB     | TAL BUF |
| Total/NA  | Analysis | 8021B         | DL  | 100      | 148842 | 10/31/13 13:30 | DGB     | TAL BUF |
| Total/NA  | Prep     | 200.7         |     |          | 147965 | 10/28/13 08:20 | NMD2    | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |     | 1        | 148862 | 10/31/13 00:05 | LMH     | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |     | 1        | 149154 | 10/31/13 16:21 | LMH     | TAL BUF |
| Total/NA  | Analysis | 300.0         |     | 5        | 148359 | 10/29/13 20:20 | KRC     | TAL BUF |
| Total/NA  | Analysis | 310.2         |     | 10       | 149005 | 10/31/13 14:53 | NCH     | TAL BUF |

**Client Sample ID: Building Sump** 

Date Collected: 10/25/13 11:00

Date Received: 10/25/13 17:00

Lab Sample ID: 480-48789-2

Matrix: Water

|           | Batch    | Batch  |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|--------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8021B  | DL  | 500      | 148842 | 10/31/13 15:29 | DGB     | TAL BUF |
| Total/NA  | Analysis | 8021B  |     | 5        | 148842 | 10/31/13 12:35 | DGB     | TAL BUF |

Client Sample ID: Post-Carbon #3

Date Collected: 10/25/13 10:30

Date Received: 10/25/13 17:00

Lab Sample ID: 480-48791-1

Matrix: Wastewater

|           | Batch    | Batch         |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|---------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method        | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8260C         |     | 1        | 149772 | 11/05/13 11:16 | CDC     | TAL BUF |
| Total/NA  | Analysis | 8021B         |     | 1        | 148842 | 10/31/13 16:38 | DGB     | TAL BUF |
| Total/NA  | Prep     | 200.7         |     |          | 147965 | 10/28/13 08:20 | NMD2    | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |     | 1        | 149154 | 10/31/13 16:24 | LMH     | TAL BUF |
| Total/NA  | Analysis | SM 4500 H+ B  |     | 1        | 148128 | 10/28/13 14:28 | KS      | TAL BUF |
| Total/NA  | Prep     | Distill/CN    |     |          | 148442 | 10/29/13 15:32 | JMB     | TAL BUF |
| Total/NA  | Analysis | 335.4         |     | 1        | 148960 | 10/31/13 13:22 | KSW     | TAL BUF |

Client Sample ID: Post-Carbon #2

Date Collected: 10/25/13 10:35

Date Received: 10/25/13 17:00

| Lab | Sample | ID: 480 | 0-48791-2 |  |
|-----|--------|---------|-----------|--|
|-----|--------|---------|-----------|--|

**Matrix: Wastewater** 

|           | Batch    | Batch  |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|--------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8021B  |     |          | 148842 | 10/31/13 17:12 | DGB     | TAL BUF |

### **Lab Chronicle**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-48789-1

Client Sample ID: Post-Carbon #1 Lab Sample ID: 480-48791-3

Date Collected: 10/25/13 10:40 Matrix: Water

Date Received: 10/25/13 17:00

|         |     | Batch    | Batch  |     | Dilution | Batch  | Prepared       |         |         |
|---------|-----|----------|--------|-----|----------|--------|----------------|---------|---------|
| Prep T  | /pe | Туре     | Method | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/N | A   | Analysis | 8021B  |     | 1        | 148842 | 10/31/13 17:46 | DGB     | TAL BUF |
| Total/N | A   | Analysis | 8021B  | DL  | 10       | 149089 | 11/01/13 10:05 | DGB     | TAL BUF |

### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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# **Certification Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-48789-1

### **Laboratory: TestAmerica Buffalo**

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority         | Program       | EPA Region | Certification ID | Expiration Date |
|-------------------|---------------|------------|------------------|-----------------|
| Arkansas DEQ      | State Program | 6          | 88-0686          | 07-06-14        |
| California        | NELAP         | 9          | 1169CA           | 09-30-14        |
| Connecticut       | State Program | 1          | PH-0568          | 09-30-14        |
| Florida           | NELAP         | 4          | E87672           | 06-30-14        |
| Georgia           | State Program | 4          | N/A              | 03-31-14        |
| Illinois          | NELAP         | 5          | 200003           | 09-30-14        |
| lowa              | State Program | 7          | 374              | 03-15-15        |
| Kansas            | NELAP         | 7          | E-10187          | 01-31-14        |
| Kentucky          | State Program | 4          | 90029            | 12-31-13        |
| Kentucky (UST)    | State Program | 4          | 30               | 04-01-14        |
| Louisiana         | NELAP         | 6          | 02031            | 06-30-14        |
| Maine             | State Program | 1          | NY00044          | 12-04-14        |
| Maryland          | State Program | 3          | 294              | 03-31-14        |
| Massachusetts     | State Program | 1          | M-NY044          | 06-30-14        |
| Michigan          | State Program | 5          | 9937             | 04-01-14        |
| Minnesota         | NELAP         | 5          | 036-999-337      | 12-31-13        |
| New Hampshire     | NELAP         | 1          | 2973             | 09-11-14        |
| New Jersey        | NELAP         | 2          | NY455            | 06-30-14        |
| New York          | NELAP         | 2          | 10026            | 04-01-14        |
| North Dakota      | State Program | 8          | R-176            | 03-31-14        |
| Oklahoma          | State Program | 6          | 9421             | 08-31-14        |
| Oregon            | NELAP         | 10         | NY200003         | 06-09-14        |
| Pennsylvania      | NELAP         | 3          | 68-00281         | 07-31-14        |
| Rhode Island      | State Program | 1          | LAO00328         | 12-31-13        |
| Tennessee         | State Program | 4          | TN02970          | 04-01-14        |
| Texas             | NELAP         | 6          | T104704412-11-2  | 07-31-14        |
| USDA              | Federal       |            | P330-11-00386    | 11-22-14        |
| Virginia          | NELAP         | 3          | 460185           | 09-14-14        |
| Washington        | State Program | 10         | C784             | 02-10-14        |
| West Virginia DEP | State Program | 3          | 252              | 12-31-13        |
| Wisconsin         | State Program | 5          | 998310390        | 08-31-14        |

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# **Method Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-48789-1

| Method        | Method Description                  | Protocol | Laboratory |
|---------------|-------------------------------------|----------|------------|
| 8260C         | Volatile Organic Compounds by GC/MS | SW846    | TAL BUF    |
| 8021B         | Volatile Organic Compounds (GC)     | SW846    | TAL BUF    |
| 200.7 Rev 4.4 | Metals (ICP)                        | EPA      | TAL BUF    |
| 300.0         | Anions, Ion Chromatography          | MCAWW    | TAL BUF    |
| 310.2         | Alkalinity                          | MCAWW    | TAL BUF    |
| 335.4         | Cyanide, Total                      | MCAWW    | TAL BUF    |
| SM 4500 H+ B  | pH                                  | SM       | TAL BUF    |

### **Protocol References:**

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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# **Sample Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-48789-1

|               |                  | ••         |                |                |
|---------------|------------------|------------|----------------|----------------|
| Lab Sample ID | Client Sample ID | Matrix     | Collected      | Received       |
| 480-48789-1   | Pre-Carbon       | Wastewater | 10/25/13 10:50 | 10/25/13 17:00 |
| 480-48789-2   | Building Sump    | Water      | 10/25/13 11:00 | 10/25/13 17:00 |
| 480-48791-1   | Post-Carbon #3   | Wastewater | 10/25/13 10:30 | 10/25/13 17:00 |
| 480-48791-2   | Post-Carbon #2   | Wastewater | 10/25/13 10:35 | 10/25/13 17:00 |
| 480-48791-3   | Post-Carbon #1   | Water      | 10/25/13 10:40 | 10/25/13 17:00 |

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lazerwood Drive

Amherst, NY 14228-2298

# **Chain of Custody Record**

Phone (716) 691-2600 Fax (716) 691-7991

| Te    | est   | Ar      | $\gamma$ | eri         | ca        |
|-------|-------|---------|----------|-------------|-----------|
| 100   |       |         |          | CONTRACT OF |           |
| - : 1 | 14042 | 14 8 74 | ZEGON.   | MENTA.      | 75 51 744 |

| Client Information  |                                |                       |                  | PM:<br>cher, E          | Brian .                                     | an J                    |                                 |                     |         |          | Carrier Tracking No(s): |               |               |          |                                |            | COC No<br>480-30379-1176.1 |   |
|---|--------------------------------|-----------------------|------------------|-------------------------|---|-------------------------|---------------------------------|---------------------|---------|----------|-------------------------|---------------|---------------|----------|--------------------------------|------------|----------------------------|---|
| Client Contact:   | Phone: Service Service E-Mail: |                       |                  |                         |   |                         |                                 |                     |         |          |                         | F             | Page          |          |                                |            |                            |   |
| Thomas Palmer Company:  |                                |                       | ,                | bria                    | n.fisc                                      | her@                    | @testamericainc.com Page 1 of 1 |                     |         |          |                         |               |               |          |                                |            |                            |   |
| Groundwater & Environmental Services Inc                                |                                |                       |                  |                         |   |                         |                                 |                     | Ar      | nalysis  | Req                     | ueste         | d             |          |                                |            |                            |   |
| Address:<br>495 Aero Drive Suite 3                                      | Due Date Requeste              | ed:                   |                  |                         |   |                         |                                 |                     |         |          |                         |               |               |          |                                | Т          | - 1                        | Preservation Codes:   |
| City:   | TAT Requested (da              | TAT Requested (days): |                  |                         |   |                         |                                 |                     |         |          |                         |               |               |          |                                |            |                            | A - HCL M - Hexane<br>B - NaOH N - None                     |
| Cheektowaga   | <b>.</b>                       | ٠, ١                  |                  |                         | 1 1   |                         |                                 |                     |         |          |                         |               |               |          |                                | -          | 1                          | C - Zn Acetate  |
| State, Zip:<br>NY, 14225  | 5                              | , [                   |                  |                         |   |                         |                                 |                     |         |          |                         | 1             |               |          |                                |            | -                          | E - NaHSO4 Q - Na2SO3                                       |
| Phone:  | PO#:                           |                       |                  |                         | 7 1   |                         |                                 |                     |         |          |                         |               |               |          |                                |            | - 1                        | F - MeOH R - Na2S2SO3<br>G - Amchlor S - H2SO4              |
| Email:  | Purchase Order<br>WO#:         | not requir            |                  |                         | <b>-</b>  2                                 |                         |                                 |                     |         |          |                         |               | -             |          |                                |            |                            | H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone |
| tpalmer@gesonline.com   |                                |                       |                  |                         | §   | 2 3                     |                                 |                     |         |          |                         |               |               |          |                                | 1          | 2                          | J - Di Water V - MCAA<br>K - EDTA W - ph 4-5                |
| Project Name.  NYSDEC - Gastown WWTP/Gastown Event Desc: Mthly Pre-Carl | Project #.<br>48002525         |                       |                  |                         | Sample (Yes or                              | 0 8 8                   | DD) Local Method                |                     | (-)     |          |                         | 1             |               |          |                                | 1          |                            | L - EDA Z - other (specify)                                 |
| Site:   | SSOW#.                         |                       |                  |                         | 1   | 8 8                     | š į                             | Total               | (+) (   |          |                         | ļ             |               |          |                                |            |                            | Other:  |
| New York  |                                |                       |                  |                         |   | OSW/SI                  |                                 | ity,                | \^^     |          |                         | 1             |               |          |                                |            | <u>:</u>                   |   |
|   |                                |                       | Sample           | Matrix<br>(w=water,     | Į Š   |                         | 200.7 - (MOD) Local Method      | 310.2 - Alkalinity, |         |          |                         | l             |               |          |                                | 1          | Total Number               |   |
|   |                                | Sample                | Type<br>(C=comp, | S=solid,<br>O=waste/oil | E   | Perform                 | 2   2                           | 2 - A               |         |          |                         | 1             |               | 1        |                                | 1 2        | Z                          |   |
| Sample Identification   | Sample Date                    | Time                  | G=grab)          | BT=Tissue, A=Ali        | Pield                                       | ۽ آھ                    | 8 8                             | 310                 | ``      |          | $\perp$                 | $\perp$       |               |          |                                | 1          | إ                          | Special Instructions/Note:                                  |
|   | $\sim$                         | $>\!\!<$              | Preserva         | tion Code:              | $\mathcal{A}$                               | ×Ν                      | D                               | N                   | Α       |          | $\perp$                 |               |               | $\sqcup$ |                                |            | ¥                          |   |
| Pre-Carbon  | . /                            |                       | 6                | Water                   | 1,1   | `` -;                   | 1                               | ,                   | 7       |          |                         |               |               |          |                                |            |                            |   |
| Lucia English   | 101                            | x 2.7                 |                  | -                       |   |                         |                                 |                     | 1       |          |                         |               |               |          |                                |            |                            |   |
|   |                                |                       |                  |                         | П   |                         |                                 |                     |         |          |                         |               |               | П        |                                |            |                            |   |
|   |                                |                       |                  |                         | 11  |                         | +                               |                     |         |          | $\dagger \dagger$       |               | +             |          | $\top$                         | +          | +                          |   |
|   |                                |                       |                  |                         | ╫   | +                       | +                               | +                   |         | -        | +                       | +             | +             | 1        | -                              | +          | +                          |   |
|   |                                |                       |                  |                         | ++  | _                       |                                 |                     |         | -        |                         | $\rightarrow$ | 1             | [ ]      | ,<br>. e. : <b>: :</b> ! ! ! ! | unt I      | 1111                       |   |
|   |                                |                       |                  |                         | Ш   |                         |                                 |                     |         |          |                         |               |               |          |                                |            |                            |   |
|   |                                |                       |                  |                         |   |                         |                                 |                     |         |          |                         | i             |               |          |                                |            | W                          |   |
|   |                                |                       |                  |                         | 11  |                         | 1                               |                     |         |          |                         |               | III           |          |                                | Mill       | MI                         | Custody   |
|   |                                |                       | -                |                         | +   | +                       |                                 |                     | -       |          | +                       | $\rightarrow$ | 48            | 0-487    | 89 C                           | hain       | of                         | Custody   |
|   |                                |                       |                  |                         | - -   | 4                       |                                 |                     |         |          |                         | $\dashv$      |               |          |                                | _          | -                          |   |
|   |                                |                       |                  |                         | Ш   |                         |                                 |                     |         |          |                         |               |               |          |                                |            |                            |   |
|   |                                |                       |                  |                         | 11  |                         |                                 |                     |         |          |                         |               |               | 1        |                                |            |                            |   |
| Possible Hazard Identification  |                                |                       |                  |                         | 7   | Samp                    | le Dis                          | posa                | I(A     | fee may  | be as                   | sesse         | if san        | nples    |                                |            |                            | longer than 1 month)  |
| Non-Hazard Flammable Skin Irritant Poison B Inknown Radiological        |                                |                       |                  |                         | Retur                                       |                         |                                 |                     | Lbis    | sposal   | By Lab                  |               |               | Archi    | ive                            | For Months |                            |   |
| Deliverable Requested: I, II, III, IV, Other (specify)                  |                                |                       |                  |                         | - 1   | Specia                  | al Inst                         | ructior             | ns/Q(   | C Requi  | rement                  | s:            |               |          |                                |            |                            |   |
| Empty Kit Relinquished by:  |                                | Date:                 |                  |                         | Tim   | ne:                     |                                 |                     |         |          |                         | М             | ethod of      | Shipme   | ent:                           |            |                            |   |
| Relinquished by:  | Date/Time.                     |                       |                  | Company                 |   | Re                      | eceived                         | by:                 | /       |          | 7                       | ->            | $\overline{}$ | Date/T   | ime:                           | 7 /        |                            | -13 171: Company  |
| Relinquished by:  | Date/Time                      | 1.12                  |                  | Company                 |   | R                       | eceived                         | l by:               | 2       |          |                         |               |               |          |                                | د >        | ) -                        | Company Company   |
|   |                                |                       |                  |                         |   | Received by: Date/Time: |                                 |                     |         |          |                         |               |               |          |                                |            |                            |   |
| Relinquished by.  | Date/Time <sup>-</sup>         |                       |                  | Company                 |   | Re                      | Received by:                    |                     |         |          | Date/1                  | ime:          |               |          | Company                        |            |                            |   |
| Custody Seals Intact: Custody Seal No.:                                 |                                |                       |                  | -,-                     |   | Co                      | ooler Te                        | mperat              | ture(s) | °C and C | ther Rer                | marks.        | -2            | 1        | 7.0                            | Ī          | J                          | <del>1</del> 1  |
| Δ Yes Δ No  |                                |                       |                  | 丄                       | Cooler Temperature(s) °C and Other Remarks. |                         |                                 |                     |         |          |                         |               |               |          |                                |            |                            |   |







### TestAmerica Buffalo

► ' ~ C Hazelwood Drive

Chain of Custody Record

<u>TestAmerica</u>

Amherst, NY 14228-2298 Phone (716) €91-260@ Fax (716) 691-7991 Carrier Tracking No(s) COC No: Client Information Fischer, Brian J 480-30388-1177.1 Phone: Client Contact: Page: Thomas Palmer brian.fischer@testamericainc.com Page 1 of 1 Job#: Company: **Analysis Requested** Groundwater & Environmental Services Inc. Due Date Requested: Preservation Codes: 495 Aero Drive Suite 3 A - HCL M - Hexane TAT Requested (days): B - NaOH N - None Cheektowaga C - Zn Acetate O - AsNaO2 State, Zip: D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 NY, 14225 F - MeOH R - Na2S2SO3 Phone PO#: G - Amchlor S - H2SO4 Purchase Order not requir H - Ascorbic Acid T - TSP Dodecahydrate Sample (Yes or No Email: 1 - Ice U - Acetone 8021B - (MOD) STARS List - VOA J - DI Water V - MCAA tpalmer@gesonline.com of containers K - EDTA W - ph 4-5 Project Name: Project #: L - EDA Z - other (specify) NYSDEC - Gastown WWTP/Gastown Event Desc: Mthly Post-Ca 48002525 Other: New York 8260B - (MOD) TCL Ŧ Number Matrix Sample (w=water. Type S=solid, Total Sample (C=comp, O=wasta/ull, Sample Identification Sample Date Time G=grab) Special Instructions/Note: BT=Tissue, A=Air Preservation Code: Post-Carbon # : Water 121 480-48791 Chain of Custody Possible Hazard Identification Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) Disposal By Lab Radiological Skin Irritant Return To Client Archive For Non-Hazard Flammable Poison B Months Deliverable Requested: I, II, III, IV, Other (specify) Special Instructions/QC Requirements: Empty Kit Relinquished by: Date: Method of Shipment: Time: Relinquished by: Company Received by Company Relinquished by Received h Company Relinguished by Date/Time Date/Time: Received by Company Custody Seals Intact: Custody Seal No.: Cooler Temperature(s) °C and Other Remarks:

Δ Yes Δ No

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### **Login Sample Receipt Checklist**

Client: New York State D.E.C. Job Number: 480-48789-1

Login Number: 48789 List Source: TestAmerica Buffalo

List Number: 1 Creator: Kolb, Chris M

| Question   | Answer | Comment |
|--|--------|---------|
| Radioactivity either was not measured or, if measured, is at or below background | True   |         |
| The cooler's custody seal, if present, is intact.                                | True   |         |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |         |
| Samples were received on ice.  | True   |         |
| Cooler Temperature is acceptable.  | True   |         |
| Cooler Temperature is recorded.  | True   |         |
| COC is present.  | True   |         |
| COC is filled out in ink and legible.  | True   |         |
| COC is filled out with all pertinent information.                                | True   |         |
| Is the Field Sampler's name present on COC?                                      | True   |         |
| There are no discrepancies between the sample IDs on the containers and he COC.  | True   |         |
| Samples are received within Holding Time.  | True   |         |
| Sample containers have legible labels.   | True   |         |
| Containers are not broken or leaking.  | True   |         |
| Sample collection date/times are provided.                                       | True   |         |
| Appropriate sample containers are used.  | True   |         |
| Sample bottles are completely filled.  | True   |         |
| Sample Preservation Verified   | True   |         |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |         |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | True   |         |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True   |         |
| Multiphasic samples are not present.   | True   |         |
| Samples do not require splitting or compositing.                                 | True   |         |
| Sampling Company provided.   | True   | ges     |
| Samples received within 48 hours of sampling.                                    | True   |         |
| Samples requiring field filtration have been filtered in the field.              | True   |         |
| Chlorine Residual checked.   | N/A    |         |
|  |        |         |

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Client: New York State D.E.C.

Job Number: 480-48789-1

Login Number: 48791 List Source: TestAmerica Buffalo

List Number: 1 Creator: Kolb, Chris M

| Question   | Answer | Comment |
|--|--------|---------|
| Radioactivity either was not measured or, if measured, is at or below background | True   |         |
| The cooler's custody seal, if present, is intact.                                | True   |         |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |         |
| Samples were received on ice.  | True   |         |
| Cooler Temperature is acceptable.  | True   |         |
| Cooler Temperature is recorded.  | True   |         |
| COC is present.  | True   |         |
| COC is filled out in ink and legible.  | True   |         |
| COC is filled out with all pertinent information.                                | True   |         |
| Is the Field Sampler's name present on COC?                                      | True   |         |
| There are no discrepancies between the sample IDs on the containers and he COC.  | True   |         |
| Samples are received within Holding Time.  | True   |         |
| Sample containers have legible labels.   | True   |         |
| Containers are not broken or leaking.  | True   |         |
| Sample collection date/times are provided.                                       | True   |         |
| Appropriate sample containers are used.  | True   |         |
| Sample bottles are completely filled.  | True   |         |
| Sample Preservation Verified   | True   |         |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |         |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | True   |         |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True   |         |
| Multiphasic samples are not present.   | True   |         |
| Samples do not require splitting or compositing.                                 | True   |         |
| Sampling Company provided.   | True   | ges     |
| Samples received within 48 hours of sampling.                                    | True   |         |
| Samples requiring field filtration have been filtered in the field.              | True   |         |
| Chlorine Residual checked.   | N/A    |         |
|  |        |         |



THE LEADER IN ENVIRONMENTAL TESTING

# **ANALYTICAL REPORT**

TestAmerica Laboratories, Inc.

TestAmerica Buffalo 10 Hazelwood Drive Amherst, NY 14228-2298 Tel: (716)691-2600

TestAmerica Job ID: 480-50510-1

Client Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Sampling Event: Qtrly Post-Carbon Qtrly Pre-Carbon

### For:

New York State D.E.C. 270 Michigan Avenue Buffalo, New York 14203

Attn: Mr. Glenn May



Authorized for release by: 12/3/2013 1:09:15 PM

Joe Giacomazza, Project Management Assistant II joe.giacomazza@testamericainc.com

Designee for

Brian Fischer, Manager of Project Management (716)504-9835

brian.fischer@testamericainc.com

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results through
Total Access

**Review your project** 

**Have a Question?** 



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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Joe Giacomazza

Project Management Assistant II

12/3/2013 1:09:16 PM

TestAmerica Job ID: 480-50510-1

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

# **Table of Contents**

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### **Definitions/Glossary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-50510-1

### **Qualifiers**

### **GC/MS VOA**

| Quaimer | Qualifier Description                              |
|---------|--|
| *       | LCS or LCSD exceeds the control limits             |
| *       | RPD of the LCS and LCSD exceeds the control limits |

### **GC VOA**

| Qualifier | Qualifier Description   |
|-----------|---|
| ī         | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value |

### **Metals**

| Qualifier | Qualifier Description  |
|-----------|--|
| J         | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### **General Chemistry**

| Qualifier | Qualifier Description  |
|-----------|--|
| HF        | Field parameter with a holding time of 15 minutes  |
| J         | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| В         | Compound was found in the blank and sample.  |
|           |  |

### **Glossary**

| Abbreviation   | These commonly used abbreviations may or may not be present in this report.                                 |
|----------------|---|
| n              | Listed under the "D" column to designate that the result is reported on a dry weight basis                  |
| %R             | Percent Recovery  |
| CNF            | Contains no Free Liquid   |
| DER            | Duplicate error ratio (normalized absolute difference)  |
| Dil Fac        | Dilution Factor   |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC            | Decision level concentration  |
| MDA            | Minimum detectable activity   |
| EDL            | Estimated Detection Limit   |
| MDC            | Minimum detectable concentration  |
| MDL            | Method Detection Limit  |
| ML             | Minimum Level (Dioxin)  |
| NC             | Not Calculated  |
| ND             | Not detected at the reporting limit (or MDL or EDL if shown)  |
| PQL            | Practical Quantitation Limit  |
| QC             | Quality Control   |
| RER            | Relative error ratio  |
| RL             | Reporting Limit or Requested Limit (Radiochemistry)   |
| RPD            | Relative Percent Difference, a measure of the relative difference between two points                        |
| TEF            | Toxicity Equivalent Factor (Dioxin)   |
| TEQ            | Toxicity Equivalent Quotient (Dioxin)   |
|                |   |

### **Case Narrative**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-50510-1

Job ID: 480-50510-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-50510-1

#### Receipt

The samples were received on 11/20/2013 12:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 3.6° C, 3.6° C, 4.2° C and 4.2° C.

Except:

Method(s) 300.0, 310.2: Limited volume recieved for 300.28 and 310.2 methods.

#### GC/MS VOA

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-50513-1). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The laboratory control sample duplicate (LCSD) for batch 154867 recovered outside control limits for the following analytes: Chloromethane and Bromoform. These analytes were not client requested spike compounds; therefore, the data have been qualified and reported.

Method(s) 8260C: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for batch 154867 recovered outside control limits for the following analytes: trans-1,3-Dichloropropene, Chlorodibromomethane, Chloromethane, Bromoform and Bromomethane.

No other analytical or quality issues were noted.

#### GC/MS Semi VOA

No analytical or quality issues were noted.

### Ion Chromatography

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-50513-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

#### **GC VOA**

Method(s) 8021B: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-50513-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

### GC Semi VOA

No analytical or quality issues were noted.

#### Metals

No analytical or quality issues were noted.

#### **General Chemistry**

Method(s) 420.4, 9066: The method blank for batch 154106 contained phenols above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed. Post-Carbon (480-50510-1)

Method(s) SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample(s) has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Post-Carbon (480-50510-1)

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### **Case Narrative**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-50510-1

### Job ID: 480-50510-1 (Continued)

### Laboratory: TestAmerica Buffalo (Continued)

No other analytical or quality issues were noted.

### **Organic Prep**

Method(s) 3510C: Insufficient sample volume was available to perform batch matrix spike/matrix spike duplicate (MS/MSD) associated with batch 153813. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

No other analytical or quality issues were noted.

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Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

**Client Sample ID: Post-Carbon** 

Date Collected: 11/20/13 11:15 Date Received: 11/20/13 12:30 Lab Sample ID: 480-50510-1

Matrix: Wastewater

| Analyte                     | Result Qu | ualifier RL | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|-----------|-------------|------|------|---|----------|----------------|---------|
| 1,1,1-Trichloroethane       | ND        | 1.0         | 0.82 | ug/L |   |          | 11/29/13 14:40 | 1       |
| 1,1,2,2-Tetrachloroethane   | ND        | 1.0         | 0.21 | ug/L |   |          | 11/29/13 14:40 | 1       |
| 1,1,2-Trichloroethane       | ND        | 1.0         | 0.23 | ug/L |   |          | 11/29/13 14:40 | 1       |
| 1,1-Dichloroethane          | ND        | 1.0         | 0.38 | ug/L |   |          | 11/29/13 14:40 | 1       |
| 1,1-Dichloroethene          | ND        | 1.0         | 0.29 | ug/L |   |          | 11/29/13 14:40 | 1       |
| 1,2-Dichloroethane          | ND        | 1.0         | 0.21 | ug/L |   |          | 11/29/13 14:40 | 1       |
| 1,2-Dichloroethene, Total   | ND        | 2.0         | 0.70 | ug/L |   |          | 11/29/13 14:40 | 1       |
| 1,2-Dichloropropane         | ND        | 1.0         | 0.72 | ug/L |   |          | 11/29/13 14:40 | 1       |
| 2-Hexanone                  | ND        | 5.0         | 1.2  | ug/L |   |          | 11/29/13 14:40 | 1       |
| 2-Butanone (MEK)            | ND        | 10          | 1.3  | ug/L |   |          | 11/29/13 14:40 | 1       |
| 4-Methyl-2-pentanone (MIBK) | ND        | 5.0         | 2.1  | ug/L |   |          | 11/29/13 14:40 | 1       |
| Acetone                     | ND        | 10          | 3.0  | ug/L |   |          | 11/29/13 14:40 | 1       |
| Benzene                     | 28        | 1.0         | 0.41 | ug/L |   |          | 11/29/13 14:40 | 1       |
| Bromodichloromethane        | ND        | 1.0         | 0.39 | ug/L |   |          | 11/29/13 14:40 | 1       |
| Bromoform                   | ND *      | 1.0         | 0.26 | ug/L |   |          | 11/29/13 14:40 | 1       |
| Bromomethane                | ND *      | 1.0         | 0.69 | ug/L |   |          | 11/29/13 14:40 | 1       |
| Carbon disulfide            | ND        | 1.0         | 0.19 | ug/L |   |          | 11/29/13 14:40 | 1       |
| Carbon tetrachloride        | ND        | 1.0         | 0.27 | ug/L |   |          | 11/29/13 14:40 | 1       |
| Chlorobenzene               | ND        | 1.0         | 0.75 | ug/L |   |          | 11/29/13 14:40 | 1       |
| Dibromochloromethane        | ND *      | 1.0         | 0.32 | ug/L |   |          | 11/29/13 14:40 | 1       |
| Chloroethane                | ND        | 1.0         | 0.32 | ug/L |   |          | 11/29/13 14:40 | 1       |
| Chloroform                  | 1.8       | 1.0         | 0.34 | ug/L |   |          | 11/29/13 14:40 | 1       |
| Chloromethane               | ND *      | 1.0         | 0.35 | ug/L |   |          | 11/29/13 14:40 | 1       |
| cis-1,3-Dichloropropene     | ND        | 1.0         | 0.36 | ug/L |   |          | 11/29/13 14:40 | 1       |
| Ethylbenzene                | ND        | 1.0         | 0.74 | ug/L |   |          | 11/29/13 14:40 | 1       |
| Methylene Chloride          | ND        | 1.0         | 0.44 | ug/L |   |          | 11/29/13 14:40 | 1       |
| Styrene                     | ND        | 1.0         | 0.73 | ug/L |   |          | 11/29/13 14:40 | 1       |
| Tetrachloroethene           | ND        | 1.0         | 0.36 | ug/L |   |          | 11/29/13 14:40 | 1       |
| Toluene                     | 1.9       | 1.0         | 0.51 | ug/L |   |          | 11/29/13 14:40 | 1       |
| trans-1,3-Dichloropropene   | ND *      | 1.0         | 0.37 | ug/L |   |          | 11/29/13 14:40 | 1       |
| Trichloroethene             | ND        | 1.0         | 0.46 | ug/L |   |          | 11/29/13 14:40 | 1       |
| Vinyl chloride              | ND        | 1.0         | 0.90 | ug/L |   |          | 11/29/13 14:40 | 1       |
| Vinyl acetate               | ND        | 5.0         | 0.85 | ug/L |   |          | 11/29/13 14:40 | 1       |
| Xylenes, Total              | ND        | 2.0         |      | ug/L |   |          | 11/29/13 14:40 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 103       |           | 66 - 137 |          | 11/29/13 14:40 | 1       |
| Toluene-d8 (Surr)            | 104       |           | 71 - 126 |          | 11/29/13 14:40 | 1       |
| 4-Bromofluorobenzene (Surr)  | 97        |           | 73 - 120 |          | 11/29/13 14:40 | 1       |

| Method: 8270D - Semivolatile | Organic Compounds (GC/MS) |     |      |      |   |                |                |         |
|------------------------------|---------------------------|-----|------|------|---|----------------|----------------|---------|
| Analyte                      | Result Qualifier          | RL  | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
| 2-Methylnaphthalene          | ND ND                     | 4.8 | 0.58 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Acenaphthene                 | ND                        | 4.8 | 0.40 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Acenaphthylene               | ND                        | 4.8 | 0.37 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Anthracene                   | ND                        | 4.8 | 0.27 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Benzo[a]anthracene           | ND                        | 4.8 | 0.35 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Benzo[a]pyrene               | ND                        | 4.8 | 0.46 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Benzo[b]fluoranthene         | ND                        | 4.8 | 0.33 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Benzo[g,h,i]perylene         | ND                        | 4.8 | 0.34 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |

TestAmerica Buffalo

12/3/2013

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Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Client Sample ID: Post-Carbon

Date Collected: 11/20/13 11:15 Date Received: 11/20/13 12:30

2-Fluorophenol

Nitrobenzene-d5

p-Terphenyl-d14

a,a,a-Trifluorotoluene

4-Bromofluorobenzene

Phenol-d5

Lab Sample ID: 480-50510-1

11/22/13 06:44

11/22/13 06:44

11/22/13 06:44

11/22/13 06:44

11/23/13 02:38

11/23/13 02:38

11/23/13 02:38

11/23/13 02:38

Matrix: Wastewater

| Analyte                     | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
|-----------------------------|-----------|-----------|----------|------|------|---|----------------|----------------|---------|
| Benzo[k]fluoranthene        | ND        |           | 4.8      | 0.71 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Biphenyl                    | ND        |           | 4.8      | 0.63 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Bis(2-ethylhexyl) phthalate | ND        |           | 4.8      | 1.7  | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Carbazole                   | ND        |           | 4.8      | 0.29 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Chrysene                    | ND        |           | 4.8      | 0.32 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Dibenz(a,h)anthracene       | ND        |           | 4.8      | 0.41 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Dibenzofuran                | ND        |           | 9.7      | 0.49 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Fluoranthene                | ND        |           | 4.8      | 0.39 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Fluorene                    | ND        |           | 4.8      | 0.35 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Indeno[1,2,3-cd]pyrene      | ND        |           | 4.8      | 0.46 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Naphthalene                 | ND        |           | 4.8      | 0.74 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Pentachlorophenol           | ND        |           | 9.7      | 2.1  | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Phenanthrene                | ND        |           | 4.8      | 0.43 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Phenol                      | ND        |           | 4.8      | 0.38 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Pyrene                      | ND        |           | 4.8      | 0.33 | ug/L |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| Surrogate                   | %Recovery | Qualifier | Limits   |      |      |   | Prepared       | Analyzed       | Dil Fac |
| 2,4,6-Tribromophenol        | 100       |           | 52 - 132 |      |      |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |
| 2-Fluorobiphenyl            | 87        |           | 48 - 120 |      |      |   | 11/22/13 06:44 | 11/23/13 02:38 | 1       |

20 - 120

46 - 120

67 - 150

16 - 120

48

89

94

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| Analyte                 | Result    | Qualifier | RL     | MDL   | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------|-----------|-----------|--------|-------|------|---|----------|----------------|---------|
| 1,2,4-Trimethylbenzene  | ND        |           | 0.20   | 0.035 | ug/L |   |          | 11/26/13 13:55 | 1       |
| 1,3,5-Trimethylbenzene  | ND        |           | 0.20   | 0.15  | ug/L |   |          | 11/26/13 13:55 | 1       |
| Benzene                 | 26        |           | 0.20   | 0.023 | ug/L |   |          | 11/26/13 13:55 | 1       |
| Ethylbenzene            | 0.26      |           | 0.20   | 0.029 | ug/L |   |          | 11/26/13 13:55 | 1       |
| Isopropylbenzene        | ND        |           | 0.20   | 0.027 | ug/L |   |          | 11/26/13 13:55 | 1       |
| Methyl tert-butyl ether | 0.34      | J         | 0.40   | 0.044 | ug/L |   |          | 11/26/13 13:55 | 1       |
| m,p-Xylene              | 0.12      | J         | 0.40   | 0.054 | ug/L |   |          | 11/26/13 13:55 | 1       |
| n-Butylbenzene          | ND        |           | 0.20   | 0.031 | ug/L |   |          | 11/26/13 13:55 | 1       |
| n-Propylbenzene         | ND        |           | 0.20   | 0.13  | ug/L |   |          | 11/26/13 13:55 | 1       |
| o-Xylene                | 0.087     | J         | 0.20   | 0.027 | ug/L |   |          | 11/26/13 13:55 | 1       |
| p-Cymene                | ND        |           | 0.20   | 0.030 | ug/L |   |          | 11/26/13 13:55 | 1       |
| sec-Butylbenzene        | ND        |           | 0.20   | 0.020 | ug/L |   |          | 11/26/13 13:55 | 1       |
| Toluene                 | 1.8       |           | 0.20   | 0.036 | ug/L |   |          | 11/26/13 13:55 | 1       |
| Xylenes, Total          | 0.21      | J         | 0.60   | 0.054 | ug/L |   |          | 11/26/13 13:55 | 1       |
| Surrogate               | %Recovery | Qualifier | Limits |       |      |   | Prepared | Analyzed       | Dil Fac |

| Method: 608 - Organochlorine Pes | ticides in Wat | ter       |       |        |      |   |                |                |         |
|----------------------------------|----------------|-----------|-------|--------|------|---|----------------|----------------|---------|
| Analyte                          | Result         | Qualifier | RL    | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Aldrin                           | ND             |           | 0.047 | 0.0063 | ug/L |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |
| alpha-BHC                        | ND             |           | 0.047 | 0.0063 | ug/L |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |
| beta-BHC                         | ND             |           | 0.047 | 0.024  | ug/L |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |

63 - 145

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TestAmerica Buffalo

11/26/13 13:55

11/26/13 13:55

Client: New York State D.E.C.

Date Received: 11/20/13 12:30

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Lab Sample ID: 480-50510-1

TestAmerica Job ID: 480-50510-1

**Client Sample ID: Post-Carbon** Date Collected: 11/20/13 11:15 **Matrix: Wastewater** 

| Analyte                | Result    | Qualifier | RL       | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
|------------------------|-----------|-----------|----------|--------|------|---|----------------|----------------|---------|
| delta-BHC              | ND        |           | 0.047    | 0.0095 | ug/L |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |
| gamma-BHC (Lindane)    | ND        |           | 0.047    | 0.0057 | ug/L |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |
| Chlordane (technical)  | ND        |           | 0.47     | 0.28   | ug/L |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |
| 4,4'-DDD               | ND        |           | 0.047    | 0.0087 | ug/L |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |
| 4,4'-DDE               | ND        |           | 0.047    | 0.011  | ug/L |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |
| 4,4'-DDT               | ND        |           | 0.047    | 0.010  | ug/L |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |
| Dieldrin               | ND        |           | 0.047    | 0.0093 | ug/L |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |
| Endosulfan I           | ND        |           | 0.047    | 0.010  | ug/L |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |
| Endosulfan II          | ND        |           | 0.047    | 0.011  | ug/L |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |
| Endosulfan sulfate     | ND        |           | 0.047    | 0.015  | ug/L |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |
| Endrin                 | ND        |           | 0.047    | 0.013  | ug/L |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |
| Endrin aldehyde        | ND        |           | 0.047    | 0.015  | ug/L |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |
| Heptachlor             | ND        |           | 0.047    | 0.0081 | ug/L |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |
| Heptachlor epoxide     | ND        |           | 0.047    | 0.0050 | ug/L |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |
| Toxaphene              | ND        |           | 0.47     | 0.11   | ug/L |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |
| Surrogate              | %Recovery | Qualifier | Limits   |        |      |   | Prepared       | Analyzed       | Dil Fac |
| DCB Decachlorobiphenyl | 74        |           | 23 - 120 |        |      |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |
| Tetrachloro-m-xylene   | 74        |           | 36 - 120 |        |      |   | 11/22/13 06:58 | 11/25/13 15:46 | 1       |

| Method: 200.7 Rev 4.4 - Metals (ICP) |                  |      |           |   |                |                |         |
|--------------------------------------|------------------|------|-----------|---|----------------|----------------|---------|
| Analyte                              | Result Qualifier | RL   | MDL Unit  | D | Prepared       | Analyzed       | Dil Fac |
| Arsenic                              | ND               | 10.0 | 5.6 ug/L  |   | 11/21/13 08:40 | 11/22/13 16:04 | 1       |
| Iron                                 | 174              | 50.0 | 19.3 ug/L |   | 11/21/13 08:40 | 11/22/13 16:04 | 1       |
| Manganese                            | 240              | 3.0  | 0.40 ug/L |   | 11/21/13 08:40 | 11/22/13 16:04 | 1       |
| Zinc                                 | 2.0 J            | 10.0 | 1.5 ug/L  |   | 11/21/13 08:40 | 11/22/13 16:04 | 1       |

| General Chemistry            |        |           |       |        |      |   |                |                |         |
|------------------------------|--------|-----------|-------|--------|------|---|----------------|----------------|---------|
| Analyte                      | Result | Qualifier | RL    | MDL    | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Oil & Grease                 | 1.9    | J         | 5.0   | 1.4    | mg/L |   | 11/21/13 04:55 | 11/21/13 04:55 | 1       |
| Cyanide, Total               | 0.35   |           | 0.010 | 0.0050 | mg/L |   | 11/20/13 23:11 | 11/21/13 10:51 | 1       |
| Phenolics, Total Recoverable | 0.0068 | JB        | 0.010 | 0.0050 | mg/L |   | 11/22/13 20:35 | 11/23/13 11:22 | 1       |
| Total Dissolved Solids       | 862    |           | 10.0  | 4.0    | mg/L |   |                | 11/21/13 18:44 | 1       |
| Biochemical Oxygen Demand    | ND     |           | 2.0   | 2.0    | mg/L |   |                | 11/21/13 04:13 | 1       |
| Analyte                      | Result | Qualifier | RL    | RL     | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Total Suspended Solids       | ND     |           | 4.0   | 4.0    | mg/L |   |                | 11/21/13 17:10 | 1       |
| pH                           | 7.35   | HF        | 0.100 | 0.100  | SU   |   |                | 11/21/13 00:50 | 1       |

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

**Client Sample ID: Pre-Carbon** 

Date Collected: 11/20/13 11:30 Date Received: 11/20/13 12:30

4-Bromofluorobenzene (Surr)

Lab Sample ID: 480-50513-1

**Matrix: Wastewater** 

| Analyte                      | Result    | Qualifier | RL       | MDL | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|-----|------|---|----------|----------------|---------|
| 1,1,1-Trichloroethane        | ND        |           | 100      | 82  | ug/L |   |          | 11/28/13 00:34 | 100     |
| 1,1,2,2-Tetrachloroethane    | ND        |           | 100      | 21  | ug/L |   |          | 11/28/13 00:34 | 100     |
| 1,1,2-Trichloroethane        | ND        |           | 100      | 23  | ug/L |   |          | 11/28/13 00:34 | 100     |
| 1,1-Dichloroethane           | ND        |           | 100      | 38  | ug/L |   |          | 11/28/13 00:34 | 100     |
| 1,1-Dichloroethene           | ND        |           | 100      | 29  | ug/L |   |          | 11/28/13 00:34 | 100     |
| 1,2-Dichloroethane           | ND        |           | 100      | 21  | ug/L |   |          | 11/28/13 00:34 | 100     |
| 1,2-Dichloroethene, Total    | ND        |           | 200      | 70  | ug/L |   |          | 11/28/13 00:34 | 100     |
| 1,2-Dichloropropane          | ND        |           | 100      | 72  | ug/L |   |          | 11/28/13 00:34 | 100     |
| 2-Hexanone                   | ND        |           | 500      | 120 | ug/L |   |          | 11/28/13 00:34 | 100     |
| 2-Butanone (MEK)             | ND        |           | 1000     | 130 | ug/L |   |          | 11/28/13 00:34 | 100     |
| 4-Methyl-2-pentanone (MIBK)  | ND        |           | 500      | 210 | ug/L |   |          | 11/28/13 00:34 | 100     |
| Acetone                      | ND        |           | 1000     | 300 | ug/L |   |          | 11/28/13 00:34 | 100     |
| Benzene                      | 5700      |           | 100      | 41  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Bromodichloromethane         | ND        |           | 100      | 39  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Bromoform                    | ND        |           | 100      | 26  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Bromomethane                 | ND        |           | 100      | 69  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Carbon disulfide             | ND        |           | 100      | 19  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Carbon tetrachloride         | ND        |           | 100      | 27  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Chlorobenzene                | ND        |           | 100      | 75  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Dibromochloromethane         | ND        |           | 100      | 32  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Chloroethane                 | ND        |           | 100      | 32  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Chloroform                   | ND        |           | 100      | 34  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Chloromethane                | ND        |           | 100      | 35  | ug/L |   |          | 11/28/13 00:34 | 100     |
| cis-1,3-Dichloropropene      | ND        |           | 100      | 36  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Ethylbenzene                 | 470       |           | 100      | 74  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Methylene Chloride           | ND        |           | 100      | 44  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Styrene                      | ND        |           | 100      | 73  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Tetrachloroethene            | ND        |           | 100      | 36  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Toluene                      | 1800      |           | 100      | 51  | ug/L |   |          | 11/28/13 00:34 | 100     |
| trans-1,3-Dichloropropene    | ND        |           | 100      | 37  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Trichloroethene              | ND        |           | 100      | 46  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Vinyl chloride               | ND        |           | 100      | 90  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Vinyl acetate                | ND        |           | 500      | 85  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Xylenes, Total               | 330       |           | 200      | 66  | ug/L |   |          | 11/28/13 00:34 | 100     |
| Surrogate                    | %Recovery | Qualifier | Limits   |     |      |   | Prepared | Analyzed       | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 105       |           | 66 - 137 |     |      | - |          | 11/28/13 00:34 | 100     |
| Toluene-d8 (Surr)            | 101       |           | 71 - 126 |     |      |   |          | 11/28/13 00:34 | 100     |

| Analyte                 | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------|--------|-----------|----|-----|------|---|----------|----------------|---------|
| 1,2,4-Trimethylbenzene  | 6.1    | J         | 20 | 3.5 | ug/L |   |          | 11/26/13 13:05 | 100     |
| 1,3,5-Trimethylbenzene  | ND     |           | 20 | 15  | ug/L |   |          | 11/26/13 13:05 | 100     |
| Benzene                 | 3100   |           | 20 | 2.3 | ug/L |   |          | 11/26/13 13:05 | 100     |
| Ethylbenzene            | 280    |           | 20 | 2.9 | ug/L |   |          | 11/26/13 13:05 | 100     |
| Isopropylbenzene        | ND     |           | 20 | 2.7 | ug/L |   |          | 11/26/13 13:05 | 100     |
| Methyl tert-butyl ether | ND     |           | 40 | 4.4 | ug/L |   |          | 11/26/13 13:05 | 100     |
| m,p-Xylene              | 120    |           | 40 | 5.4 | ug/L |   |          | 11/26/13 13:05 | 100     |
| n-Butylbenzene          | ND     |           | 20 | 3.1 | ug/L |   |          | 11/26/13 13:05 | 100     |

73 - 120

96

TestAmerica Buffalo

12/3/2013

11/28/13 00:34

Page 10 of 19

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Lab Sample ID: 480-50513-1

TestAmerica Job ID: 480-50510-1

**Matrix: Wastewater** 

| C | lie | nt | Sa | ım | ple | ID: | Pr | e-( | Carbon |
|---|-----|----|----|----|-----|-----|----|-----|--------|
| _ |     | _  |    |    |     |     |    |     |        |

Date Collected: 11/20/13 11:30 Date Received: 11/20/13 12:30

**General Chemistry** 

Analyte

Chloride

**Alkalinity, Total** 

**Sulfate** 

| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|------|------|---|----------------|----------------|---------|
| n-Propylbenzene              | ND        |           | 20       | 13   | ug/L |   |                | 11/26/13 13:05 | 100     |
| o-Xylene                     | 91        |           | 20       | 2.7  | ug/L |   |                | 11/26/13 13:05 | 100     |
| p-Cymene                     | ND        |           | 20       | 3.0  | ug/L |   |                | 11/26/13 13:05 | 100     |
| sec-Butylbenzene             | ND        |           | 20       | 2.0  | ug/L |   |                | 11/26/13 13:05 | 100     |
| Toluene                      | 1000      |           | 20       | 3.6  | ug/L |   |                | 11/26/13 13:05 | 100     |
| Xylenes, Total               | 210       |           | 60       | 5.4  | ug/L |   |                | 11/26/13 13:05 | 100     |
| Surrogate                    | %Recovery | Qualifier | Limits   |      |      |   | Prepared       | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene       | 94        |           | 63 - 145 |      |      |   |                | 11/26/13 13:05 | 100     |
| 4-Bromofluorobenzene         | 94        |           | 64 - 141 |      |      |   |                | 11/26/13 13:05 | 100     |
| Method: 200.7 Rev 4.4 - Meta | als (ICP) |           |          |      |      |   |                |                |         |
| Analyte                      | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Calcium                      | 139000    |           | 500      | 100  | ug/L |   | 11/21/13 08:40 | 11/22/13 16:23 | 1       |
| Iron                         | 2430      |           | 50.0     | 19.3 | ug/L |   | 11/21/13 08:40 | 11/22/13 16:23 | 1       |
| Magnesium                    | 77100     |           | 200      | 43.4 | ug/L |   | 11/21/13 08:40 | 11/22/13 16:23 | 1       |
| Potassium                    | 5500      |           | 500      | 100  | ug/L |   | 11/21/13 08:40 | 11/22/13 16:23 | 1       |
| Sodium                       | 67300     |           | 1000     | 324  | ug/L |   | 11/21/13 08:40 | 11/22/13 16:23 | 1       |

RL

2.5

10.0

100

MDL Unit

1.4 mg/L

1.7 mg/L

40.0 mg/L

Prepared

Analyzed

11/21/13 23:00

11/21/13 23:00

11/26/13 10:56

Dil Fac

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Result Qualifier

98.2

149

### Lab Chronicle

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-50510-1

Lab Sample ID: 480-50510-1

Lab Sample ID: 480-50513-1

**Matrix: Wastewater** 

**Matrix: Wastewater** 

Client Sample ID: Post-Carbon

Date Collected: 11/20/13 11:15 Date Received: 11/20/13 12:30

|           | Batch    | Batch          |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|----------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method         | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8260C          |     | 1        | 154867 | 11/29/13 14:40 | NMD1    | TAL BUF |
| Total/NA  | Prep     | 3510C          |     |          | 153813 | 11/22/13 06:44 | DLE     | TAL BUF |
| Total/NA  | Analysis | 8270D          |     | 1        | 154000 | 11/23/13 02:38 | RMM     | TAL BUF |
| Total/NA  | Analysis | 8021B          |     | 1        | 154412 | 11/26/13 13:55 | DGB     | TAL BUF |
| Total/NA  | Prep     | 3510C          |     |          | 153816 | 11/22/13 06:58 | DLE     | TAL BUF |
| Total/NA  | Analysis | 608            |     | 1        | 154164 | 11/25/13 15:46 | LMW     | TAL BUF |
| Total/NA  | Prep     | 200.7          |     |          | 153573 | 11/21/13 08:40 | NMD2    | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4  |     | 1        | 154689 | 11/22/13 16:04 | LMH     | TAL BUF |
| Total/NA  | Analysis | SM 4500 H+ B   |     | 1        | 153537 | 11/21/13 00:50 | KS      | TAL BUF |
| Total/NA  | Prep     | 1664A          |     |          | 153543 | 11/21/13 04:55 | RMB     | TAL BUF |
| Total/NA  | Analysis | 1664A          |     | 1        | 153545 | 11/21/13 04:55 | RMB     | TAL BUF |
| Total/NA  | Analysis | SM 5210B       |     | 1        | 153557 | 11/21/13 04:13 | KWJ     | TAL BUF |
| Total/NA  | Prep     | Distill/CN     |     |          | 153527 | 11/20/13 23:11 | KWJ     | TAL BUF |
| Total/NA  | Analysis | 335.4          |     | 1        | 153681 | 11/21/13 10:51 | RS      | TAL BUF |
| Total/NA  | Analysis | SM 2540D       |     | 1        | 153740 | 11/21/13 17:10 | KS      | TAL BUF |
| Total/NA  | Analysis | SM 2540C       |     | 1        | 153749 | 11/21/13 18:44 | KS      | TAL BUF |
| Total/NA  | Prep     | Distill/Phenol |     |          | 154029 | 11/22/13 20:35 | CLT     | TAL BUF |
| Total/NA  | Analysis | 420.4          |     | 1        | 154106 | 11/23/13 11:22 | KSW     | TAL BUF |

**Client Sample ID: Pre-Carbon** 

Date Collected: 11/20/13 11:30

Date Received: 11/20/13 12:30

| _         | Batch    | Batch         |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|---------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method        | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8260C         |     | 100      | 154794 | 11/28/13 00:34 | RAL     | TAL BUF |
| Total/NA  | Analysis | 8021B         |     | 100      | 154412 | 11/26/13 13:05 | DGB     | TAL BUF |
| Total/NA  | Prep     | 200.7         |     |          | 153573 | 11/21/13 08:40 | NMD2    | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |     | 1        | 154689 | 11/22/13 16:23 | LMH     | TAL BUF |
| Total/NA  | Analysis | 300.0         |     | 5        | 153663 | 11/21/13 23:00 | KRC     | TAL BUF |
| Total/NA  | Analysis | 310.2         |     | 10       | 154509 | 11/26/13 10:56 | NCH     | TAL BUF |

### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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TestAmerica Buffalo

TestAmerica Job ID: 480-50510-1

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

### Laboratory: TestAmerica Buffalo

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority         | Program       | EPA Region | Certification ID | Expiration Date |
|-------------------|---------------|------------|------------------|-----------------|
| Arkansas DEQ      | State Program | 6          | 88-0686          | 07-06-14        |
| California        | NELAP         | 9          | 1169CA           | 09-30-14        |
| Connecticut       | State Program | 1          | PH-0568          | 09-30-14        |
| Florida           | NELAP         | 4          | E87672           | 06-30-14        |
| Georgia           | State Program | 4          | N/A              | 03-31-14        |
| Ilinois           | NELAP         | 5          | 200003           | 09-30-14        |
| owa               | State Program | 7          | 374              | 03-01-15        |
| Kansas            | NELAP         | 7          | E-10187          | 01-31-14        |
| Kentucky          | State Program | 4          | 90029            | 12-31-13 *      |
| Kentucky (UST)    | State Program | 4          | 30               | 04-01-14        |
| Louisiana         | NELAP         | 6          | 02031            | 06-30-14        |
| Maine             | State Program | 1          | NY00044          | 12-04-14        |
| Maryland          | State Program | 3          | 294              | 03-31-14        |
| Massachusetts     | State Program | 1          | M-NY044          | 06-30-14        |
| Michigan          | State Program | 5          | 9937             | 04-01-14        |
| Minnesota         | NELAP         | 5          | 036-999-337      | 12-31-13 *      |
| New Hampshire     | NELAP         | 1          | 2337             | 11-17-14        |
| New Jersey        | NELAP         | 2          | NY455            | 06-30-14        |
| New York          | NELAP         | 2          | 10026            | 04-01-14        |
| North Dakota      | State Program | 8          | R-176            | 03-31-14        |
| Oklahoma          | State Program | 6          | 9421             | 08-31-14        |
| Oregon            | NELAP         | 10         | NY200003         | 06-09-14        |
| Pennsylvania      | NELAP         | 3          | 68-00281         | 07-31-14        |
| Rhode Island      | State Program | 1          | LAO00328         | 12-31-13        |
| Tennessee         | State Program | 4          | TN02970          | 04-01-14        |
| Texas             | NELAP         | 6          | T104704412-11-2  | 07-31-14        |
| JSDA              | Federal       |            | P330-11-00386    | 11-22-14        |
| /irginia          | NELAP         | 3          | 460185           | 09-14-14        |
| Washington        | State Program | 10         | C784             | 02-10-14        |
| West Virginia DEP | State Program | 3          | 252              | 12-31-13        |
| Wisconsin         | State Program | 5          | 998310390        | 08-31-14        |

<sup>\*</sup> Expired certification is currently pending renewal and is considered valid.

### **Method Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-50510-1

| lethod       | Method Description                     | Protocol  | Laboratory |
|--------------|--|-----------|------------|
| 260C         | Volatile Organic Compounds by GC/MS    | SW846     | TAL BUF    |
| 270D         | Semivolatile Organic Compounds (GC/MS) | SW846     | TAL BUF    |
| 021B         | Volatile Organic Compounds (GC)        | SW846     | TAL BUF    |
| 08           | Organochlorine Pesticides in Water     | 40CFR136A | TAL BUF    |
| 00.7 Rev 4.4 | Metals (ICP)                           | EPA       | TAL BUF    |
| 664A         | HEM and SGT-HEM                        | 1664A     | TAL BUF    |
| 00.0         | Anions, Ion Chromatography             | MCAWW     | TAL BUF    |
| 10.2         | Alkalinity                             | MCAWW     | TAL BUF    |
| 35.4         | Cyanide, Total                         | MCAWW     | TAL BUF    |
| 20.4         | Phenolics, Total Recoverable           | MCAWW     | TAL BUF    |
| M 2540C      | Solids, Total Dissolved (TDS)          | SM        | TAL BUF    |
| M 2540D      | Solids, Total Suspended (TSS)          | SM        | TAL BUF    |
| M 4500 H+ B  | pH                                     | SM        | TAL BUF    |
| M 5210B      | BOD, 5-Day                             | SM        | TAL BUF    |

#### Protocol References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TestAmerica Buffalo

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### **Sample Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-50510-1

| Lab Sample ID | Client Sample ID | Matrix     | Collected      | Received       |
|---------------|------------------|------------|----------------|----------------|
| 480-50510-1   | Post-Carbon      | Wastewater | 11/20/13 11:15 | 11/20/13 12:30 |
| 480-50513-1   | Pre-Carbon       | Wastewater | 11/20/13 11:30 | 11/20/13 12:30 |

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10: Juzelwood Drive

### **Chain of Custody Record**

<u>TestAmerica</u>

Amherst, NY 14228-2298 THE BEST OF WAS TROUBLE TA, TERRIN Phone (716) 691-2600 Fax (716) 691-7991 Lab PM Carrier Tracking No(s): COC No: 480-8777-1178.1 Fischer, Brian J **Client Information** E-Mail Page: Client Contact brian.fischer@testamericainc.com Page 1 of 1 Thomas Palmer Company: Groundwater & Environmental Services Inc **Analysis Requested** Due Date Requested: Preservation Codes: Address: 495 Aero Drive Suite 3 M - Hexane TAT Requested (days): B - NaOH N - None Cheektowaga C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S State, Zip. E - NaHSO4 Q - Na2SO3 NY, 14225 F - MeOH R - Na2S2SO3 Phone: G - Amchlor S - H2SO4 8021B - (MOD) STARS List - VOA - 8021 Purchase Order not requir T - TSP Dodecahydrate 5210B - Biochemical Oxygen Demand 2540C\_Calcd - Total Dissolved Solids H - Ascorbic Acid 8270C - (MOD) TCL SVOA - OLM04.2 420.4 - Phenolics, Total Recoverable I - Ice U - Acetone Email: V - MCAA J - DI Water tpalmer@gesonline.com 8260B - (MOD) TCL list OLM04.2 of containers K-EDTA W - ph 4-5 Project Name Project #: L - EDA Z - other (specify) 1664A\_Calc - Oil & Grease NYSDEC - Gastown WWTP/Gastown Event Desc: Qtrly Post-Car 48002525 2540D - Total Suspended SSOW#: 335.4 - Cyanide, Total Other: New York SM4500\_H+ - pH Total Number Matrix Sample (W=water, S=solid, Type Sample (C=comp, Sample Date Time G=grab) | BT=Tissue, A=Air Special Instructions/Note: Sample Identification Preservation Code: s Post-Carbon Water Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Disposal By Lab Radiological Return To Client Archive For Non-Hazard Flammable Months Deliverable Requested: I, II, III, IV, Other (specify) Special Instructions/QC Requirements: Method of Shipment Empty Kit Relinquished by: Date: Time: Relinquished by:---Date/Time: Company Received by 1230 Relinquished by: Received by Company Relinquished by: Date/Time Company Received by Company Custody Seals Intact: Custody Seal No. Cooler Temperature(s) °C and Other Remarks.

Δ Yes Δ No

Page

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10 Hazelwood Drive

Amherst, NY 14228-2298

# **Chain of Custody Record**

<u>TestAmerica</u>

| Client Information  Client Contact  Chomas Palmer                      | Sampler:                    |                |                              | Lab   |              |                          |                            |                        |                                |   |          | Carrier     | Trackin     | g No(                                 | s):     |       |                     | COC No:                                   |  |
|--|-----------------------------|----------------|------------------------------|---|--------------|--------------------------|----------------------------|------------------------|--------------------------------|---|----------|-------------|-------------|---------------------------------------|---------|-------|---------------------|---|--|
| Thomas Palmer  | Phone                       | Fisch          |                              |   |              | M:<br>ner, Brian J       |                            |                        |                                |   |          |             |             |                                       |         | _     | 480-8790-1179.1     |   |  |
|  | Phone.                      | ·:             |                              | E-Ma<br>bria  |              | scher@testamericainc.com |                            |                        |                                |   |          |             |             |                                       |         |       | Page<br>Page 1 of 1 |   |  |
| Company<br>Groundwater & Environmental Services Inc                    |                             |                |                              |   |              |                          |                            |                        | A                              | nalvsi  | is Req   | uest        | eď          |                                       |         |       | Ī                   | Job#:                                     |  |
| Address:   | Due Date Request            | ed:            |                              |   | . 13         | · (8)                    | $\neg$                     | $\overline{}$          |                                | <del>                                      </del> | 1        | <del></del> | <del></del> | $\overline{}$                         |         |       | 1                   | Preservation Cod                          | es:  |
| 495 Aero Drive Suite 3   |                             |                |                              |   |              |                          |                            |                        |                                |   |          |             |             |                                       |         |       | 1                   | A - HCL                                   | M - Hexane   |
| City:  | TAT Requested (d            | ays):          |                              |   |              |                          |                            |                        |                                |   |          |             |             |                                       |         | .     |                     | B - NaOH<br>C - Zn Acetate                | N - None<br>O - AsNaO2                             |
| State, Zip:<br>NY, 14225   |                             |                |                              |   |              |                          |                            |                        |                                |   |          |             |             |                                       |         |       | - 1                 | D - Nitric Acid<br>E - NaHSO4<br>F - MeOH | P - Na2O4S<br>Q - Na2SO3                           |
| <sup>o</sup> hone:   | PO#:<br>Purchase Order      | not requir     |                              |   | ٦            |                          |                            |                        | - 8021                         |   |          |             |             |                                       |         | 1     |                     | G - Amchlor<br>H - Ascorbic Acid          | R - Na2S2SO3<br>S - H2SO4<br>T - TSP Dodecahydrate |
| Email:   | WO #:                       |                |                              |   | ٦ <u>۲</u>   | 9                        | ,                          | ~                      | 8 - A                          |   | 1 1      |             |             |                                       |         |       |                     | l - Ice<br>J - DI Water                   | U - Acetone<br>V - MCAA                            |
| palmer@gesonline.com   | Deci- et #                  |                |                              |   | - 8          | Ž                        |                            | 2                      | %                              |   |          |             |             |                                       |         | 1     | 8                   | K - EDTA                                  | W - ph 4-5   |
| Project Name:<br>NYSDEC - Gastown WWTP/Gastown Event Desc: Qtrly Pre-( | Project #:<br>Carb 48002525 |                |                              |   | 2            |                          | thod a                     | OLM04.2                | List                           |   |          |             |             |                                       |         |       | containers          | L - EDA                                   | Z - other (specify)                                |
| Gite:<br>New York  | SSOW#:                      |                |                              |   | amp          | SD (Y                    | y Loc                      | l. ist                 | rars                           | Total   |          |             |             |                                       |         |       | o co                | Other:                                    |  |
| TOTAL POINT  |                             |                |                              |   |              |                          | בַּ   בַ                   | ١١٤                    | S (                            | l k   |          |             |             |                                       |         |       |                     |   |  |
| Sample Identification  | Sample Date                 | Sample<br>Time | Sample Type (C=comp, G=grab) | Matrix<br>(W-water,<br>S-solid,<br>O-waste/oli,<br>-Tissue, A-Air | Field Filter | Perform MS/M             | 200.7 - (MOD) Local Method | 8260B - (MOD) TCL list | 8021B - (MOD) STARS List - VOA | 310.2 - Alkalinity,                               |          |             |             |                                       |         | Š     | Total Number        | Special Ins                               | structions/Note:                                   |
|  |                             |                | Preservation                 |   | X            | X N                      | - 1.0                      | 35.                    | Α                              | N   |          | <i>"</i>    | 7           | 1.                                    |         |       | X                   | AT THE                                    | - 1 V  |
| Pre-Carbon   | 1:/:                        | 1 1            |                              | Water   | 1            | 1                        |                            |                        | .,                             | .==   |          |             |             |                                       |         |       |                     |   |  |
|  |                             |                |                              |   | П            |                          |                            |                        |                                |   |          |             |             |                                       |         |       |                     |   |  |
|  |                             |                |                              |   | П            |                          |                            |                        |                                |   |          |             |             |                                       |         | ,     |                     |   | ·  |
|  |                             |                |                              |   | П            |                          |                            |                        |                                |   |          | 111111      |             | i i i i i i i i i i i i i i i i i i i | III     |       |                     |   |  |
|  |                             |                |                              |   | Ш            |                          |                            |                        |                                |   |          |             |             |                                       |         |       |                     |   |  |
|  |                             |                |                              |   |              |                          |                            |                        |                                |   | _        |             |             |                                       |         |       |                     |   |  |
| _  |                             |                |                              |   | Ш            |                          |                            |                        |                                |   | _ '      | 480-5       | 0513        | Chai                                  | of C    | ustod |                     |   |  |
|  |                             |                |                              |   | Ш            | $\perp$                  |                            |                        |                                |   |          |             |             |                                       | _       | -     | y                   |   |  |
|  |                             |                |                              |   | Ш            |                          |                            |                        |                                |   |          |             |             |                                       |         |       |                     |   |  |
|  |                             |                |                              |   | Ш            |                          |                            |                        |                                |   |          |             |             |                                       |         |       | "                   |   |  |
|  |                             |                |                              |   | Ш            |                          |                            |                        |                                |   |          |             |             |                                       |         |       |                     |   |  |
| Possible Hazard Identification   |                             |                |                              |   | 7            | Samp                     | 7                          |                        |                                |   | y be as  | sesse       | d if sa     | mple                                  | es are  |       |                     | longer than 1 m                           |  |
|  | ison B Unknow               | ın Rad         | diological                   |   |              |                          | Retu                       |                        | _                              |   | Di:      | sposa       | By La       | b                                     |         | Arch  | nive                | For                                       | Months   |
| Deliverable Requested: I, II, III, IV, Other (specify)                 |                             |                |                              |   | ľ            | Speci                    | al Ins                     | tructio                | ons/Q                          | C Requ  | irement  | S:          |             |                                       |         |       |                     | _   |  |
| Empty Kit Relinquished by:   |                             | Date:          |                              |   | Tim          | e:                       |                            |                        |                                |   |          |             | Method      | of Ship                               | oment:  |       |                     |   |  |
| Relinquished by:   | Date/Time:                  | 1, -           | 12700                        | ompany  | ,            | R                        | eceive                     | d by                   | 7_                             |   |          | ->_         |             | Da                                    | te/Time | 70-   | . / 5               | 3 1230                                    | Company  |
| Relinquished by:   | Date/Time:                  | -71-           |                              | ompany  |              | R                        | eceive                     | d by                   |                                |   |          |             |             | Da                                    | te/Time | 20-   | ,                   | 1650                                      | Company  |
| Relinquished by:   | Date/Time.                  |                | С                            | ompany  |              | R                        | eceive                     | d by                   |                                |   |          |             |             | Da                                    | te/Time |       |                     |   | Company  |
| Custody Seals Intact: Custody Seal No.:                                |                             |                |                              |   |              | С                        | ooler T                    | empera                 | ature(s                        | °C and  | Other Re | marks:      |             |                                       | ٦.      | •     | _                   | LICEH                                     | -  |









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### **Login Sample Receipt Checklist**

Client: New York State D.E.C. Job Number: 480-50510-1

Login Number: 50510 List Source: TestAmerica Buffalo

List Number: 1 Creator: Kolb, Chris M

| Question   | Answer | Comment   |
|--|--------|---|
| Radioactivity either was not measured or, if measured, is at or below background | True   |   |
| The cooler's custody seal, if present, is intact.                                | True   |   |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |   |
| Samples were received on ice.  | True   |   |
| Cooler Temperature is acceptable.  | True   |   |
| Cooler Temperature is recorded.  | True   |   |
| COC is present.  | True   |   |
| COC is filled out in ink and legible.  | True   |   |
| COC is filled out with all pertinent information.                                | True   |   |
| Is the Field Sampler's name present on COC?                                      | True   |   |
| There are no discrepancies between the sample IDs on the containers and the COC. | True   |   |
| Samples are received within Holding Time.  | True   |   |
| Sample containers have legible labels.   | True   |   |
| Containers are not broken or leaking.  | True   |   |
| Sample collection date/times are provided.                                       | True   |   |
| Appropriate sample containers are used.  | True   |   |
| Sample bottles are completely filled.  | True   |   |
| Sample Preservation Verified   | True   |   |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |   |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | True   |   |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True   |   |
| Multiphasic samples are not present.   | True   |   |
| Samples do not require splitting or compositing.                                 | True   |   |
| Sampling Company provided.   | True   | ges   |
| Samples received within 48 hours of sampling.                                    | True   |   |
| Samples requiring field filtration have been filtered in the field.              | True   |   |
| Chlorine Residual checked.   | True   | Yes: Samples checked, no residual chlorine detected |

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### **Login Sample Receipt Checklist**

Client: New York State D.E.C. Job Number: 480-50510-1

Login Number: 50513 List Source: TestAmerica Buffalo

List Number: 1 Creator: Kolb, Chris M

| Question   | Answer | Comment                              |
|--|--------|--------------------------------------|
| Radioactivity either was not measured or, if measured, is at or below background | True   |                                      |
| The cooler's custody seal, if present, is intact.                                | True   |                                      |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |                                      |
| Samples were received on ice.  | True   |                                      |
| Cooler Temperature is acceptable.  | True   |                                      |
| Cooler Temperature is recorded.  | True   |                                      |
| COC is present.  | True   |                                      |
| COC is filled out in ink and legible.  | True   |                                      |
| COC is filled out with all pertinent information.                                | True   |                                      |
| Is the Field Sampler's name present on COC?                                      | True   |                                      |
| There are no discrepancies between the sample IDs on the containers and the COC. | True   |                                      |
| Samples are received within Holding Time.  | True   |                                      |
| Sample containers have legible labels.   | True   |                                      |
| Containers are not broken or leaking.  | True   |                                      |
| Sample collection date/times are provided.                                       | True   |                                      |
| Appropriate sample containers are used.  | True   |                                      |
| Sample bottles are completely filled.  | True   |                                      |
| Sample Preservation Verified   | True   |                                      |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   | limited volume for 300_28D and 310.2 |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | True   |                                      |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True   |                                      |
| Multiphasic samples are not present.   | True   |                                      |
| Samples do not require splitting or compositing.                                 | True   |                                      |
| Sampling Company provided.   | True   | ges                                  |
| Samples received within 48 hours of sampling.                                    | True   |                                      |
| Samples requiring field filtration have been filtered in the field.              | True   |                                      |
| Chlorine Residual checked.   | N/A    |                                      |

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THE LEADER IN ENVIRONMENTAL TESTING

## **ANALYTICAL REPORT**

TestAmerica Laboratories, Inc.

TestAmerica Buffalo 10 Hazelwood Drive Amherst, NY 14228-2298 Tel: (716)691-2600

TestAmerica Job ID: 480-52297-1

Client Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Sampling Event: Mthly Post-Carbon Mthly Pre-Carbon

#### For:

New York State D.E.C. 270 Michigan Avenue Buffalo, New York 14203

Attn: Mr. Glenn May

Authorized for release by:

1/6/2014 9:48:46 AM

Brian Fischer, Manager of Project Management (716)504-9835

brian.fischer@testamericainc.com

····· Links ·····

Review your project results through

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Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Brian Fischer Manager of Project Management 1/6/2014 9:48:46 AM

TestAmerica Job ID: 480-52297-1

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

# **Table of Contents**

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### **Definitions/Glossary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-52297-1

#### **Qualifiers**

#### **GC VOA**

| Qualifier | Qualifier Description   |
|-----------|---|
| T         | Popult is loss than the PL but greater than or equal to the MDL and the concentration is an approximate value |

#### **General Chemistry**

| Qualifier | Qualifier Description                             |
|-----------|---|
| HF        | Field parameter with a holding time of 15 minutes |

#### **Glossary**

MDC

| Abbreviation   | These commonly used abbreviations may or may not be present in this report.                                 |
|----------------|---|
| ¤              | Listed under the "D" column to designate that the result is reported on a dry weight basis                  |
| %R             | Percent Recovery  |
| CNF            | Contains no Free Liquid   |
| DER            | Duplicate error ratio (normalized absolute difference)  |
| Dil Fac        | Dilution Factor   |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC            | Decision level concentration  |
| MDA            | Minimum detectable activity   |
| EDL            | Estimated Detection Limit   |

| MDL | Method Detection Limit |
|-----|------------------------|
| ML  | Minimum Level (Dioxin) |
| NC  | Not Calculated         |

NC Not Calculated

ND Not detected at the reporting limit (or MDL or EDL if shown)

Minimum detectable concentration

PQL Practical Quantitation Limit

QC Quality Control
RER Relative error ratio

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

#### **Case Narrative**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-52297-1

Job ID: 480-52297-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-52297-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 12/19/2013 2:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.2° C and 3.4° C.

#### GC/MS VOA

No analytical or quality issues were noted.

#### Ion Chromatography

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-52298-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

#### GC VOA

Method(s) 8021B: The following samples were diluted to bring the concentration of target analytes within the calibration range: (480-52297-3 MS), (480-52297-3 MSD), Outside Sump (480-52298-2), Post-Carbon-1 (480-52297-3), Pre-Carbon (480-52298-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

#### Metals

No analytical or quality issues were noted.

#### **General Chemistry**

Method(s) SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample(s) has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute time frame: Post-Carbon-3 (480-52297-1)

No other analytical or quality issues were noted.

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TestAmerica Job ID: 480-52297-1

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Client: New York State D.E.C.

**Client Sample ID: Post-Carbon-3** Lab Sample ID: 480-52297-1

Date Collected: 12/19/13 10:10 **Matrix: Wastewater** Date Received: 12/19/13 14:20

| Analyte                     | Result | Qualifier | RL  | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-----------------------------|--------|-----------|-----|------|------|---|----------|----------------|---------|
| 1,1,1-Trichloroethane       | ND     |           | 1.0 | 0.82 | ug/L |   |          | 12/20/13 23:49 | 1       |
| 1,1,2,2-Tetrachloroethane   | ND     |           | 1.0 | 0.21 | ug/L |   |          | 12/20/13 23:49 | 1       |
| 1,1,2-Trichloroethane       | ND     |           | 1.0 | 0.23 | ug/L |   |          | 12/20/13 23:49 | 1       |
| 1,1-Dichloroethane          | ND     |           | 1.0 | 0.38 | ug/L |   |          | 12/20/13 23:49 | 1       |
| 1,1-Dichloroethene          | ND     |           | 1.0 | 0.29 | ug/L |   |          | 12/20/13 23:49 | 1       |
| 1,2-Dichloroethane          | ND     |           | 1.0 | 0.21 | ug/L |   |          | 12/20/13 23:49 | 1       |
| 1,2-Dichloroethene, Total   | ND     |           | 2.0 | 0.70 | ug/L |   |          | 12/20/13 23:49 | 1       |
| 1,2-Dichloropropane         | ND     |           | 1.0 | 0.72 | ug/L |   |          | 12/20/13 23:49 | 1       |
| 2-Hexanone                  | ND     |           | 5.0 | 1.2  | ug/L |   |          | 12/20/13 23:49 | 1       |
| 2-Butanone (MEK)            | ND     |           | 10  | 1.3  | ug/L |   |          | 12/20/13 23:49 | 1       |
| 4-Methyl-2-pentanone (MIBK) | ND     |           | 5.0 | 2.1  | ug/L |   |          | 12/20/13 23:49 | 1       |
| Acetone                     | ND     |           | 10  | 3.0  | ug/L |   |          | 12/20/13 23:49 | 1       |
| Benzene                     | ND     |           | 1.0 | 0.41 | ug/L |   |          | 12/20/13 23:49 | 1       |
| Bromodichloromethane        | ND     |           | 1.0 | 0.39 | ug/L |   |          | 12/20/13 23:49 | 1       |
| Bromoform                   | ND     |           | 1.0 | 0.26 | ug/L |   |          | 12/20/13 23:49 | 1       |
| Bromomethane                | ND     |           | 1.0 | 0.69 | ug/L |   |          | 12/20/13 23:49 | 1       |
| Carbon disulfide            | ND     |           | 1.0 | 0.19 | ug/L |   |          | 12/20/13 23:49 | 1       |
| Carbon tetrachloride        | ND     |           | 1.0 | 0.27 | ug/L |   |          | 12/20/13 23:49 | 1       |
| Chlorobenzene               | ND     |           | 1.0 | 0.75 | ug/L |   |          | 12/20/13 23:49 | 1       |
| Dibromochloromethane        | ND     |           | 1.0 | 0.32 | ug/L |   |          | 12/20/13 23:49 | 1       |
| Chloroethane                | ND     |           | 1.0 | 0.32 | ug/L |   |          | 12/20/13 23:49 | 1       |
| Chloroform                  | ND     |           | 1.0 | 0.34 | ug/L |   |          | 12/20/13 23:49 | 1       |
| Chloromethane               | ND     |           | 1.0 | 0.35 | ug/L |   |          | 12/20/13 23:49 | 1       |
| cis-1,3-Dichloropropene     | ND     |           | 1.0 | 0.36 | ug/L |   |          | 12/20/13 23:49 | 1       |
| Ethylbenzene                | ND     |           | 1.0 | 0.74 | ug/L |   |          | 12/20/13 23:49 | 1       |
| Methylene Chloride          | ND     |           | 1.0 | 0.44 | ug/L |   |          | 12/20/13 23:49 | 1       |
| Styrene                     | ND     |           | 1.0 | 0.73 | ug/L |   |          | 12/20/13 23:49 | 1       |
| Tetrachloroethene           | ND     |           | 1.0 | 0.36 | ug/L |   |          | 12/20/13 23:49 | 1       |
| Toluene                     | ND     |           | 1.0 | 0.51 | ug/L |   |          | 12/20/13 23:49 | 1       |
| trans-1,3-Dichloropropene   | ND     |           | 1.0 | 0.37 | ug/L |   |          | 12/20/13 23:49 | 1       |
| Trichloroethene             | ND     |           | 1.0 | 0.46 | ug/L |   |          | 12/20/13 23:49 | 1       |
| Vinyl chloride              | ND     |           | 1.0 | 0.90 | ug/L |   |          | 12/20/13 23:49 | 1       |
| Vinyl acetate               | ND     |           | 5.0 | 0.85 | ug/L |   |          | 12/20/13 23:49 | 1       |
| Xylenes, Total              | ND     |           | 2.0 | 0.66 | ug/L |   |          | 12/20/13 23:49 | 1       |

| Surrogate                    | %Recovery | Qualifier | Limits   | Prepared | Analyzed       | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 104       |           | 66 - 137 |          | 12/20/13 23:49 | 1       |
| Toluene-d8 (Surr)            | 102       |           | 71 - 126 |          | 12/20/13 23:49 | 1       |
| 4-Bromofluorobenzene (Surr)  | 96        |           | 73 - 120 |          | 12/20/13 23:49 | 1       |

| Method: 8021B - | Volatile Organic | Compounds | (GC) |
|-----------------|------------------|-----------|------|
|-----------------|------------------|-----------|------|

|                         |        | ,         |      |       |      |   |          |                |         |
|-------------------------|--------|-----------|------|-------|------|---|----------|----------------|---------|
| Analyte                 | Result | Qualifier | RL   | MDL   | Unit | D | Prepared | Analyzed       | Dil Fac |
| 1,2,4-Trimethylbenzene  | ND     |           | 0.20 | 0.035 | ug/L |   |          | 12/26/13 10:24 | 1       |
| 1,3,5-Trimethylbenzene  | ND     |           | 0.20 | 0.15  | ug/L |   |          | 12/26/13 10:24 | 1       |
| Benzene                 | ND     |           | 0.20 | 0.023 | ug/L |   |          | 12/26/13 10:24 | 1       |
| Ethylbenzene            | ND     |           | 0.20 | 0.029 | ug/L |   |          | 12/26/13 10:24 | 1       |
| Isopropylbenzene        | ND     |           | 0.20 | 0.027 | ug/L |   |          | 12/26/13 10:24 | 1       |
| Methyl tert-butyl ether | ND     |           | 0.40 | 0.044 | ug/L |   |          | 12/26/13 10:24 | 1       |
| m,p-Xylene              | ND     |           | 0.40 | 0.054 | ug/L |   |          | 12/26/13 10:24 | 1       |
| n-Butylbenzene          | ND     |           | 0.20 | 0.031 | ug/L |   |          | 12/26/13 10:24 | 1       |
|                         |        |           |      |       |      |   |          |                |         |

TestAmerica Buffalo

1/6/2014

Page 6 of 20

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Lab Sample ID: 480-52297-1

12/23/13 21:32

Analyzed

12/20/13 21:02

Dil Fac

TestAmerica Job ID: 480-52297-1

**Matrix: Wastewater** 

| C | ient | Samp | le IL | ): P | ost- | Carl | bon-3 | į |
|---|------|------|-------|------|------|------|-------|---|
|---|------|------|-------|------|------|------|-------|---|

Date Collected: 12/19/13 10:10 Date Received: 12/19/13 14:20

Cyanide, Total

Analyte

рН

| Analyte                          | Result    | Qualifier | RL       | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
|----------------------------------|-----------|-----------|----------|-------|------|---|----------------|----------------|---------|
| n-Propylbenzene                  | ND        |           | 0.20     | 0.13  | ug/L |   |                | 12/26/13 10:24 | 1       |
| o-Xylene                         | ND        |           | 0.20     | 0.027 | ug/L |   |                | 12/26/13 10:24 | 1       |
| p-Cymene                         | ND        |           | 0.20     | 0.030 | ug/L |   |                | 12/26/13 10:24 | 1       |
| sec-Butylbenzene                 | ND        |           | 0.20     | 0.020 | ug/L |   |                | 12/26/13 10:24 | 1       |
| Toluene                          | ND        |           | 0.20     | 0.036 | ug/L |   |                | 12/26/13 10:24 | 1       |
| Xylenes, Total                   | ND        |           | 0.60     | 0.054 | ug/L |   |                | 12/26/13 10:24 | 1       |
| Surrogate                        | %Recovery | Qualifier | Limits   |       |      |   | Prepared       | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene           | 89        |           | 63 - 145 |       |      |   |                | 12/26/13 10:24 | 1       |
| 4-Bromofluorobenzene             | 90        |           | 64 - 141 |       |      |   |                | 12/26/13 10:24 | 1       |
| -<br>Method: 200.7 Rev 4.4 - Met | als (ICP) |           |          |       |      |   |                |                |         |
| Analyte                          | Result    | Qualifier | RL       | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Iron                             | 158       |           | 50.0     | 19.3  | ug/L |   | 12/20/13 09:30 | 12/22/13 01:07 | 1       |
| General Chemistry                |           |           |          |       |      |   |                |                |         |
| Analyte                          | Result    | Qualifier | RL       | MDL   | Unit | D | Prepared       | Analyzed       | Dil Fac |

0.010

0.100

RL

0.30

Result Qualifier

7.69 HF

0.0050 mg/L

0.100 SU

RL Unit

12/23/13 02:19

Prepared

D

Client: New York State D.E.C.

Date Collected: 12/19/13 10:15

Date Received: 12/19/13 14:20

a,a,a-Trifluorotoluene

4-Bromofluorobenzene

Client Sample ID: Post-Carbon-2

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-52297-1

Lab Sample ID: 480-52297-2

12/26/13 10:58

12/26/13 10:58

Matrix: Water

| Analyte                 | Result    | Qualifier | RL     | MDL   | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------|-----------|-----------|--------|-------|------|---|----------|----------------|---------|
| 1,2,4-Trimethylbenzene  | ND        |           | 0.20   | 0.035 | ug/L |   |          | 12/26/13 10:58 | 1       |
| 1,3,5-Trimethylbenzene  | ND        |           | 0.20   | 0.15  | ug/L |   |          | 12/26/13 10:58 | 1       |
| Benzene                 | 0.12      | J         | 0.20   | 0.023 | ug/L |   |          | 12/26/13 10:58 | 1       |
| Ethylbenzene            | ND        |           | 0.20   | 0.029 | ug/L |   |          | 12/26/13 10:58 | 1       |
| Isopropylbenzene        | ND        |           | 0.20   | 0.027 | ug/L |   |          | 12/26/13 10:58 | 1       |
| Methyl tert-butyl ether | ND        |           | 0.40   | 0.044 | ug/L |   |          | 12/26/13 10:58 | 1       |
| m,p-Xylene              | ND        |           | 0.40   | 0.054 | ug/L |   |          | 12/26/13 10:58 | 1       |
| n-Butylbenzene          | ND        |           | 0.20   | 0.031 | ug/L |   |          | 12/26/13 10:58 | 1       |
| n-Propylbenzene         | ND        |           | 0.20   | 0.13  | ug/L |   |          | 12/26/13 10:58 | 1       |
| o-Xylene                | ND        |           | 0.20   | 0.027 | ug/L |   |          | 12/26/13 10:58 | 1       |
| p-Cymene                | ND        |           | 0.20   | 0.030 | ug/L |   |          | 12/26/13 10:58 | 1       |
| sec-Butylbenzene        | ND        |           | 0.20   | 0.020 | ug/L |   |          | 12/26/13 10:58 | 1       |
| Toluene                 | 0.16      | J         | 0.20   | 0.036 | ug/L |   |          | 12/26/13 10:58 | 1       |
| Xylenes, Total          | ND        |           | 0.60   | 0.054 | ug/L |   |          | 12/26/13 10:58 | 1       |
| Surrogate               | %Recovery | Qualifier | Limits |       |      |   | Prepared | Analyzed       | Dil Fac |

63 - 145

64 - 141

92

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-52297-1

Lab Sample ID: 480-52297-3

**Matrix: Water** 

| Client | Sampl | e ID: | Post- | Carbo | n-1 |
|--------|-------|-------|-------|-------|-----|
|--------|-------|-------|-------|-------|-----|

Date Collected: 12/19/13 10:20 Date Received: 12/19/13 14:20

| Analyte                 | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
|-------------------------|-----------|-----------|----------|------|------|---|----------|----------------|---------|
| 1,2,4-Trimethylbenzene  | 1.4       | J         | 2.0      | 0.35 | ug/L |   |          | 12/26/13 11:54 | 10      |
| 1,3,5-Trimethylbenzene  | ND        |           | 2.0      | 1.5  | ug/L |   |          | 12/26/13 11:54 | 10      |
| Benzene                 | 180       |           | 2.0      | 0.23 | ug/L |   |          | 12/30/13 14:58 | 10      |
| Ethylbenzene            | 43        |           | 2.0      | 0.29 | ug/L |   |          | 12/26/13 11:54 | 10      |
| Isopropylbenzene        | ND        |           | 2.0      | 0.27 | ug/L |   |          | 12/26/13 11:54 | 10      |
| Methyl tert-butyl ether | 6.7       |           | 4.0      | 0.44 | ug/L |   |          | 12/26/13 11:54 | 10      |
| m,p-Xylene              | 15        |           | 4.0      | 0.54 | ug/L |   |          | 12/26/13 11:54 | 10      |
| n-Butylbenzene          | ND        |           | 2.0      | 0.31 | ug/L |   |          | 12/26/13 11:54 | 10      |
| n-Propylbenzene         | ND        |           | 2.0      | 1.3  | ug/L |   |          | 12/26/13 11:54 | 10      |
| o-Xylene                | 10        |           | 2.0      | 0.27 | ug/L |   |          | 12/26/13 11:54 | 10      |
| p-Cymene                | ND        |           | 2.0      | 0.30 | ug/L |   |          | 12/26/13 11:54 | 10      |
| sec-Butylbenzene        | ND        |           | 2.0      | 0.20 | ug/L |   |          | 12/26/13 11:54 | 10      |
| Toluene                 | 150       |           | 2.0      | 0.36 | ug/L |   |          | 12/26/13 11:54 | 10      |
| Xylenes, Total          | 25        |           | 6.0      | 0.54 | ug/L |   |          | 12/26/13 11:54 | 10      |
| Surrogate               | %Recovery | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene  | 90        |           | 63 - 145 |      |      | - |          | 12/26/13 11:54 | 10      |
| 4-Bromofluorobenzene    | 92        |           | 64 - 141 |      |      |   |          | 12/26/13 11:54 | 10      |

Client: New York State D.E.C.

Date Received: 12/19/13 14:20

Magnesium

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-52297-1

Lab Sample ID: 480-52298-1

**Matrix: Wastewater** 

Client Sample ID: Pre-Carbon Date Collected: 12/19/13 10:25

| Analyte                          | Result    | Qualifier | RL       | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
|----------------------------------|-----------|-----------|----------|------|------|---|----------------|----------------|---------|
| 1,2,4-Trimethylbenzene           | 43        |           | 4.0      | 0.69 | ug/L |   |                | 12/26/13 13:37 | 20      |
| 1,3,5-Trimethylbenzene           | 13        |           | 4.0      | 3.0  | ug/L |   |                | 12/26/13 13:37 | 20      |
| Benzene                          | 610       |           | 4.0      | 0.47 | ug/L |   |                | 12/30/13 16:40 | 20      |
| Ethylbenzene                     | 770       |           | 4.0      | 0.57 | ug/L |   |                | 12/26/13 13:37 | 20      |
| Isopropylbenzene                 | 5.1       |           | 4.0      | 0.54 | ug/L |   |                | 12/26/13 13:37 | 20      |
| Methyl tert-butyl ether          | 46        |           | 8.0      | 0.87 | ug/L |   |                | 12/26/13 13:37 | 20      |
| m,p-Xylene                       | 350       |           | 8.0      | 1.1  | ug/L |   |                | 12/26/13 13:37 | 20      |
| n-Butylbenzene                   | ND        |           | 4.0      | 0.62 | ug/L |   |                | 12/26/13 13:37 | 20      |
| n-Propylbenzene                  | ND        |           | 4.0      | 2.6  | ug/L |   |                | 12/26/13 13:37 | 20      |
| o-Xylene                         | ND        |           | 4.0      | 0.54 | ug/L |   |                | 12/26/13 13:37 | 20      |
| p-Cymene                         | ND        |           | 4.0      | 0.59 | ug/L |   |                | 12/26/13 13:37 | 20      |
| sec-Butylbenzene                 | ND        |           | 4.0      | 0.41 | ug/L |   |                | 12/26/13 13:37 | 20      |
| Toluene                          | 200       |           | 4.0      | 0.71 | ug/L |   |                | 12/30/13 16:40 | 20      |
| Xylenes, Total                   | 350       |           | 12       | 1.1  | ug/L |   |                | 12/26/13 13:37 | 20      |
| Surrogate                        | %Recovery | Qualifier | Limits   |      |      |   | Prepared       | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene           | 91        |           | 63 - 145 |      |      |   |                | 12/26/13 13:37 | 20      |
| 4-Bromofluorobenzene             | 89        |           | 64 - 141 |      |      |   |                | 12/26/13 13:37 | 20      |
| -<br>Method: 200.7 Rev 4.4 - Met | als (ICP) |           |          |      |      |   |                |                |         |
| Analyte                          |           | Qualifier | RL       | MDL  | Unit | D | Prepared       | Analyzed       | Dil Fac |
| Calcium                          | 139000    |           | 500      | 100  | ug/L |   | 12/20/13 09:30 | 12/22/13 01:05 | 1       |
| Iron                             | 338       |           | 50.0     | 19.3 | ug/L |   | 12/20/13 09:30 | 12/22/13 01:05 | 1       |

| Potassium         | 5230       |           | 500    | 100 | ug/L         |          | 12/20/13 09:30 | 12/22/13 01:05          | 1       |
|-------------------|------------|-----------|--------|-----|--------------|----------|----------------|-------------------------|---------|
| Sodium            | 72500      |           | 1000   | 324 | ug/L         |          | 12/20/13 09:30 | 12/22/13 01:05          | 1       |
| General Chemistry |            |           |        |     |              |          |                |                         |         |
| Analyte           | Result     | Qualifier | RL     | MDL | Unit         | D        | Prepared       | Analyzed                | Dil Fac |
| Analyte Chloride  | Result 113 | Qualifier | 2.5 RL |     | Unit<br>mg/L | D        | Prepared       | Analyzed 12/23/13 19:03 | Dil Fac |
|                   |            | Qualifier |        | 1.4 |              | <u>D</u> | Prepared       |                         |         |

200

89500

43.4 ug/L

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Client: New York State D.E.C.

Date Collected: 12/19/13 10:30

Date Received: 12/19/13 14:20

4-Bromofluorobenzene

Client Sample ID: Outside Sump

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-52297-1

Lab Sample ID: 480-52298-2

Matrix: Water

12/26/13 14:11

20

| Method: 8021B - Volatile Org | ganic Compounds (0 | GC)       |          |      |      |   |          |                |         |
|------------------------------|--------------------|-----------|----------|------|------|---|----------|----------------|---------|
| Analyte                      | Result             | Qualifier | RL       | MDL  | Unit | D | Prepared | Analyzed       | Dil Fac |
| 1,2,4-Trimethylbenzene       | ND                 |           | 4.0      | 0.69 | ug/L |   |          | 12/26/13 14:11 | 20      |
| 1,3,5-Trimethylbenzene       | ND                 |           | 4.0      | 3.0  | ug/L |   |          | 12/26/13 14:11 | 20      |
| Benzene                      | 740                |           | 4.0      | 0.47 | ug/L |   |          | 12/30/13 17:15 | 20      |
| Ethylbenzene                 | 590                |           | 4.0      | 0.57 | ug/L |   |          | 12/26/13 14:11 | 20      |
| Isopropylbenzene             | 3.3                | J         | 4.0      | 0.54 | ug/L |   |          | 12/26/13 14:11 | 20      |
| Methyl tert-butyl ether      | 37                 |           | 8.0      | 0.87 | ug/L |   |          | 12/26/13 14:11 | 20      |
| m,p-Xylene                   | 83                 |           | 8.0      | 1.1  | ug/L |   |          | 12/26/13 14:11 | 20      |
| n-Butylbenzene               | ND                 |           | 4.0      | 0.62 | ug/L |   |          | 12/26/13 14:11 | 20      |
| n-Propylbenzene              | ND                 |           | 4.0      | 2.6  | ug/L |   |          | 12/26/13 14:11 | 20      |
| o-Xylene                     | 130                |           | 4.0      | 0.54 | ug/L |   |          | 12/26/13 14:11 | 20      |
| p-Cymene                     | ND                 |           | 4.0      | 0.59 | ug/L |   |          | 12/26/13 14:11 | 20      |
| sec-Butylbenzene             | ND                 |           | 4.0      | 0.41 | ug/L |   |          | 12/26/13 14:11 | 20      |
| Toluene                      | 250                |           | 4.0      | 0.71 | ug/L |   |          | 12/30/13 17:15 | 20      |
| Xylenes, Total               | 210                |           | 12       | 1.1  | ug/L |   |          | 12/26/13 14:11 | 20      |
| Surrogate                    | %Recovery          | Qualifier | Limits   |      |      |   | Prepared | Analyzed       | Dil Fac |
| a,a,a-Trifluorotoluene       | 87                 |           | 63 - 145 |      |      | - |          | 12/26/13 14:11 | 20      |

64 - 141

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TestAmerica Buffalo

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

Client Sample ID: Post-Carbon-3

Date Collected: 12/19/13 10:10 Date Received: 12/19/13 14:20 Lab Sample ID: 480-52297-1

Matrix: Wastewater

|           | Batch    | Batch         |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|---------------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method        | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8260C         |     | 1        | 158907 | 12/20/13 23:49 | NQN     | TAL BUF |
| Total/NA  | Analysis | 8021B         |     | 1        | 159364 | 12/26/13 10:24 | DGB     | TAL BUF |
| Total/NA  | Prep     | 200.7         |     |          | 158691 | 12/20/13 09:30 | NMD2    | TAL BUF |
| Total/NA  | Analysis | 200.7 Rev 4.4 |     | 1        | 159038 | 12/22/13 01:07 | AMH     | TAL BUF |
| Total/NA  | Analysis | SM 4500 H+ B  |     | 1        | 158928 | 12/20/13 21:02 | KS      | TAL BUF |
| Total/NA  | Prep     | Distill/CN    |     |          | 159010 | 12/23/13 02:19 | KWJ     | TAL BUF |
| Total/NA  | Analysis | 335.4         |     | 1        | 159213 | 12/23/13 21:32 | JME     | TAL BUF |

Client Sample ID: Post-Carbon-2

Batch

8021B

Method

Date Collected: 12/19/13 10:15

Prep Type

Total/NA

Date Received: 12/19/13 14:20

Lab Sample ID: 480-52297-2 Matrix: Water

| Prepared       |         |         |
|----------------|---------|---------|
| or Analyzed    | Analyst | Lab     |
| 12/26/13 10:58 | DGB     | TAL BUF |

Client Sample ID: Post-Carbon-1

Туре

Analysis

Date Collected: 12/19/13 10:20

Date Received: 12/19/13 14:20

| Lab Sample ID: 480-52297-3 |
|----------------------------|
|----------------------------|

Matrix: Water

|           | Batch    | Batch  |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|--------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Туре     | Method | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8021B  |     | 10       | 159364 | 12/26/13 11:54 | DGB     | TAL BUF |
| Total/NA  | Analysis | 8021B  |     | 10       | 159770 | 12/30/13 14:58 | DGB     | TAL BUF |

Run

Dilution

Factor

Batch

Number

159364

Client Sample ID: Pre-Carbon

Date Collected: 12/19/13 10:25

Date Received: 12/19/13 14:20

| Lab | Sample | ID:  | 48  | 0-522 | 298-1 |
|-----|--------|------|-----|-------|-------|
|     |        | Matr | ix: | Waste | water |

Lab Sample ID: 480-52298-2

Batch Batch Dilution Batch Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab Total/NA Analysis 8021B 20 159364 12/26/13 13:37 DGB TAL BUF Total/NA Analysis 8021B 20 159770 12/30/13 16:40 DGB TAL BUF Total/NA 200.7 TAL BUF Prep 158691 12/20/13 09:30 NMD2 Total/NA 200.7 Rev 4.4 TAL BUF Analysis 1 159038 12/22/13 01:05 AMH TAL BUF Total/NA Analysis 300.0 5 158795 12/23/13 19:03 **KRC** Total/NA Analysis 10 12/31/13 10:50 NCH TAL BUF 310.2 160079

Client Sample ID: Outside Sump

Date Collected: 12/19/13 10:30

Date Received: 12/19/13 14:20

| 2/19/13 10:30 |  |  | Matrix: Water |
|---------------|--|--|---------------|
| 2/19/13 14:20 |  |  |               |
|               |  |  |               |

|           | Batch    | Batch  |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|--------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Туре     | Method | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8021B  |     | 20       | 159364 | 12/26/13 14:11 | DGB     | TAL BUF |

TestAmerica Buffalo

### **Lab Chronicle**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-52297-1

Client Sample ID: Outside Sump

Lab Sample ID: 480-52298-2

Date Collected: 12/19/13 10:30 Matrix: Water

Date Received: 12/19/13 14:20

|           | Batch    | Batch  |     | Dilution | Batch  | Prepared       |         |         |
|-----------|----------|--------|-----|----------|--------|----------------|---------|---------|
| Prep Type | Type     | Method | Run | Factor   | Number | or Analyzed    | Analyst | Lab     |
| Total/NA  | Analysis | 8021B  |     | 20       | 159770 | 12/30/13 17:15 | DGB     | TAL BUF |

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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### **Certification Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-52297-1

### **Laboratory: TestAmerica Buffalo**

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

| thority   | Program                         |   | EPA Region  | Certification ID                        | Expiration Date |
|---|---------------------------------|---|---|---|-----------------|
| w York  | NELAP                           |   | 2   | 10026                                   | 04-01-14        |
| The following analytes  | are included in this report, bu | it are not certified under thi                      | s certification:  |   |                 |
| Analysis Method   | Prep Method                     | Matrix  | Analyt  | е                                       |                 |
| 8021B   |                                 | Wastewater  | sec-Bu  | ıtylbenzene                             |                 |
| 8021B   |                                 | Water   | sec-Bu  | utylbenzene                             |                 |
| ,   | are included in this report, bu |   | , ,   | •                                       |                 |
| ,   | •                               |   | , ,   | •                                       |                 |
| The following analytes  Analysis Method  8021B                        | are included in this report, bu | t certification is not offered  Matrix  Wastewater  | by the governing a  Analyte m,p-Xy                        | e                                       |                 |
| Analysis Method   | •                               | Matrix  | Analyt  | e<br>ylene                              |                 |
| Analysis Method<br>8021B  | •                               | Matrix<br>Wastewater                                | Analyte m,p-Xy  | e<br>ylene<br>ne                        |                 |
| Analysis Method<br>8021B<br>8021B                                     | •                               | Matrix Wastewater Wastewater                        | Analyti<br>m,p-Xy<br>o-Xyle                               | e<br>ylene<br>ne<br>ylene               |                 |
| Analysis Method<br>8021B<br>8021B<br>8021B                            | •                               | Matrix Wastewater Wastewater Water                  | Analyt<br>m,p-Xy<br>o-Xyle<br>m,p-Xy<br>o-Xyle            | e<br>ylene<br>ne<br>ylene               |                 |
| Analysis Method<br>8021B<br>8021B<br>8021B<br>8021B                   | •                               | Matrix Wastewater Wastewater Water Water            | Analyt<br>m,p-Xy<br>o-Xyle<br>m,p-Xy<br>o-Xyle<br>1,2-Dio | e<br>ylene<br>ne<br>ylene<br>ne         |                 |
| Analysis Method<br>8021B<br>8021B<br>8021B<br>8021B<br>8021B<br>8021C | •                               | Matrix Wastewater Wastewater Water Water Wastewater | Analyt<br>m,p-Xy<br>o-Xyle<br>m,p-Xy<br>o-Xyle<br>1,2-Dio | e ylene ne ylene ne chloroethene, Total |                 |

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### **Method Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-52297-1

| Method        | Method Description                  | Protocol | Laboratory |
|---------------|-------------------------------------|----------|------------|
| 8260C         | Volatile Organic Compounds by GC/MS | SW846    | TAL BUF    |
| 8021B         | Volatile Organic Compounds (GC)     | SW846    | TAL BUF    |
| 200.7 Rev 4.4 | Metals (ICP)                        | EPA      | TAL BUF    |
| 300.0         | Anions, Ion Chromatography          | MCAWW    | TAL BUF    |
| 310.2         | Alkalinity                          | MCAWW    | TAL BUF    |
| 335.4         | Cyanide, Total                      | MCAWW    | TAL BUF    |
| SM 4500 H+ B  | pH                                  | SM       | TAL BUF    |

#### **Protocol References:**

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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### **Sample Summary**

Client: New York State D.E.C.

Project/Site: NYSDEC-Gastown WWTP: Site# 915171

TestAmerica Job ID: 480-52297-1

| Lab Sample ID | Client Sample ID | Matrix     | Collected      | Received       |
|---------------|------------------|------------|----------------|----------------|
| 480-52297-1   | Post-Carbon-3    | Wastewater | 12/19/13 10:10 | 12/19/13 14:20 |
| 480-52297-2   | Post-Carbon-2    | Water      | 12/19/13 10:15 | 12/19/13 14:20 |
| 480-52297-3   | Post-Carbon-1    | Water      | 12/19/13 10:20 | 12/19/13 14:20 |
| 480-52298-1   | Pre-Carbon       | Wastewater | 12/19/13 10:25 | 12/19/13 14:20 |
| 480-52298-2   | Outside Sump     | Water      | 12/19/13 10:30 | 12/19/13 14:20 |

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### TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

# **Chain of Custody Record**

| TestAn | nerica |
|--------|--------|
|        |        |

THE LEADER IN ENVIRONMENTAL TENTING

| Client Information   | Sampler:               | Palm           | ,          | Lab<br>Fisc                      | PM:<br>cher, Br  | rian J                    |              | _                              |                   |                |         | Ca      | mier T  | racking | No(s)                    | :       |                             |                | OC No:<br>80-30389-117                    | 7.1     |                             |              |
|--|------------------------|----------------|------------|----------------------------------|------------------|---------------------------|--------------|--------------------------------|-------------------|----------------|---------|---------|---------|---------|--------------------------|---------|-----------------------------|----------------|---|---------|-----------------------------|--------------|
| Client Contact: Thomas Palmer  | Phone: (714)           | 866 35         | 590        | E-Ma<br>bria                     | ail:<br>ın.fisch | er@tes                    | stame        | ericaino                       | C.COI             | m              |         |         |         |         |                          |         |                             |                | age:<br>Page 1 of 1                       |         |                             |              |
| Company:<br>Groundwater & Environmental Services Inc   | <u> </u>               | _              |            |                                  |                  |                           |              |                                |                   | alysi          | s R     | eane    | este    |         |                          |         |                             |                | ob #:                                     |         |                             |              |
| Address:<br>495 Aero Drive Suite 3   | Due Date Request       | ed:            |            |                                  |                  |                           |              |                                | T                 |                | T       |         | T       | T       |                          |         |                             | P              | reservation C                             | odes:   |                             |              |
| City:  | TAT Requested (d       | ays):          |            | -                                |                  |                           |              |                                | 1                 |                |         |         |         |         |                          |         | 1                           | E              | A - HCL<br>B - NaOH                       | N - N   |                             |              |
| CheektowagaState, Zip:   | 10                     | da             |            |                                  | i.               |                           |              | - 1                            |                   | -              |         |         |         |         |                          |         | 3                           | ַוֹ            | C - Zn Acetate<br>D - Nitric Acid         | P - N   | sNaO2<br>a2O4S              |              |
| NY, 14225Phone:  | PO#:                   |                |            | _                                | - 1              |                           |              |                                |                   |                |         |         |         |         |                          |         | -  -                        | . F            | E - NaHSO4<br>F - MeOH                    | R-N     | la2SO3<br>la2S2SO3<br>l2SO4 |              |
|  | Purchase Order<br>WO#: | not requir     |            |                                  | 2                |                           |              | - 8021                         |                   |                |         |         |         |         |                          |         |                             | H              | 3 - Amchlor<br>1 - Ascorbic Acid<br>- Ice | T - T   | SP Dodecah<br>scetone       | ydrate       |
| Email:<br>tpalmer@gesonline.com  |                        |                |            |                                  | 5 S              |                           | 04.2         | VOA                            |                   |                |         |         | 1       |         |                          |         |                             |                | J - DI Water<br>K - EDTA                  | V - M   |                             |              |
| Project Name: NYSDEC - Gastown WWTP/Gastown Event Desc: Mthly Post-Ca                            | Project #:<br>48002525 |                |            |                                  | ا ع              |                           | list OLM04.2 | List -                         |                   |                |         |         |         |         |                          |         |                             |                | - EDA                                     |         | ther (specify)              | )            |
| Site:<br>New York  | SSOW#:                 |                |            |                                  | d d              |                           | TCL list     | 8021B - (MOD) STARS List - VOA | Total             |                |         |         |         |         |                          |         |                             | <u> </u>       | other:                                    |         |                             |              |
|  |                        |                | Sample     | Matrix                           | De de            |                           | - (MOD) T    | s (ao                          |                   | SM4500_H+ - pH |         |         |         |         |                          |         |                             |                |   |         |                             |              |
|  |                        | Samala         | Туре       | (W=water,<br>S=solid,            | FIE              | · - Iron                  | B            | B - (N                         | 335.4 - Cyanide,  | , H            |         |         |         |         |                          |         |                             | Total Number   |   |         |                             |              |
| Sample Identification  | Sample Date            | Sample<br>Time |            | O=waste/oil,<br>BT=Tissue, A=Air | Floid            | 200.7                     | 8260B        | 8021                           | 335.4             | SM4            |         |         | $\perp$ |         |                          |         |                             |                | Special                                   | Instruc | tions/Note                  | <b>&gt;:</b> |
| 2  |                        | $\geq \leq$    |            | ation Code:                      | X                |                           | A            | A B                            |                   | N              |         |         |         |         |                          |         |                             | <b>4</b>       |   |         |                             |              |
| Post-Carbon -3   | 12-19.13               | 1010           | Grab       | Water                            | Н                | ×                         | ×            | <u>۲</u> ۲                     | ×                 | <b>*</b>       | $\perp$ | $\perp$ | $\perp$ | +       |                          |         |                             |                |   | _       |                             |              |
| Post Calbon - 2<br>Post Calbon - 1   | <u> </u>               | 1015           |            |                                  | Ш                | $\perp$                   | Ш            | X                              | _                 |                | 1       | $\perp$ | +       | $\bot$  |                          |         | À                           |                |   |         |                             |              |
| Post Carley - 1  |                        | 1020           | <u>.</u>   |                                  | Щ                | $\perp$                   | Щ            | ×                              | 4                 |                | 4       | _       | _       | !       | <br>                     | <br>    |                             |                |   |         |                             |              |
|  |                        |                |            |                                  | Ш                |                           |              |                                |                   |                | $\perp$ | $\perp$ | _       |         |                          |         |                             | Ш              |   | Ш       | _                           |              |
|  |                        |                |            |                                  | $\perp \perp$    |                           |              |                                |                   |                |         |         | _       | ╢       |                          |         |                             | Ш              |   | Ш       |                             |              |
|  |                        |                |            |                                  |                  |                           |              |                                |                   |                |         |         | _       | <br>480 | <b>  </b>      <br> -522 | 97 CI   | l <b>II</b> IIIII<br>hain ∢ | IIIIII<br>of C | <b>        </b><br> ustody                |         |                             |              |
|  |                        |                |            |                                  | Ш                |                           |              |                                |                   |                |         |         | _       | -100    |                          |         |                             | o. •           | adioay                                    |         |                             |              |
|  |                        |                |            |                                  |                  |                           |              |                                |                   |                |         |         |         |         |                          |         |                             |                |   |         |                             |              |
|  |                        |                |            |                                  |                  |                           |              |                                |                   |                |         |         |         |         |                          |         |                             |                |   |         |                             |              |
|  |                        |                |            |                                  |                  |                           |              |                                |                   |                |         |         |         |         |                          |         |                             |                |   |         |                             |              |
|  |                        |                |            |                                  | $\prod$          |                           |              |                                |                   |                |         |         |         |         |                          |         |                             |                |   |         |                             |              |
| Possible Hazard Identification   |                        |                |            |                                  | s                |                           | -            |                                |                   | ee ma          |         | _       |         |         |                          | _       |                             |                | onger than 1                              | month)  |                             |              |
| Non-Hazard Flammable Skin Irritant Poison Deliverable Requested: I, II, III, IV, Other (specify) | B Unknow               | m Rad          | liological |                                  | -                | <sup>∟</sup> Re<br>pecial |              | To Cli                         |                   | Pagu           |         | Dispo   | osal E  | y Lat   | )                        |         | Arch                        | ive I          | For                                       | Mon     | ths                         |              |
|  |                        | In-t           |            |                                  |                  |                           | 1113010      | 10110113                       | , QO              | rtequ          |         | enta.   | Ive     | thod o  | China                    | t-      |                             |                |   |         |                             |              |
| Empty Kit Relinquished by:   | Date/Time:             | Date:          | ١          | Company                          | Time             |                           | ∕<br>elved b | y: //                          | _                 | /              | 1       | /       |         | thod o  |                          | /Time:  |                             | 1 0            | ) )                                       | Com     | pany                        |              |
| Relinquished by  | 12-19-75               | 11400          | ,          | Company                          | <b>i</b>         | 177                       | <del> </del> | y ly                           | $\langle \rangle$ | <u>K</u>       | 14/     | hi      | 7       |         | 1 1                      | 人       | 14/                         | 1              | 5 140                                     |         | Pany RU                     | JHC.         |
| Relinquished by:   | Date/Time:             |                |            | Company                          |                  | Rece                      | eiveld b     | y./                            | IL                |                | v       |         |         |         |                          | /Timeˈ: |                             |                |   | Com     | npany                       |              |
| Relinquished by:   | Date/Time:             |                |            | Company                          |                  | Rece                      | ved b        |                                |                   |                |         |         |         |         | Date                     | /Time:  |                             |                |   | Com     | pany                        |              |
| Custody Seals Intact: Custody Seal No.: Δ Yes Δ No   |                        |                |            |                                  |                  | Coole                     | er Tem       | peratur                        | e(s) '            | °C and         | Other   | Rema    | rks:    |         | #                        | Ì       | _                           | ( /            | .2  | '       |                             |              |
| A 169 A 110  |                        |                |            |                                  |                  |                           |              |                                |                   |                |         |         |         |         |                          | 1       |                             | <u>ر )</u>     |   |         |                             |              |







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#### TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

# **Chain of Custody Record**

TestAmerico

THE LEADER OF SAVISOUMENTAL TESTING

| Phone (716) 691-2600 Fax (716) 691-7991                                  |                        |            |  |                          |                |                     |                            |                           |             |           |  | ·        | . 7     | laine a N   | (a/a).    |                    |              | <del></del>           | 200 No.  |                          |              |
|--|------------------------|------------|--|--------------------------|----------------|---------------------|----------------------------|---------------------------|-------------|-----------|--|----------|---------|-------------|-----------|--------------------|--------------|-----------------------|--|--------------------------|--------------|
| Client Information   | Sampler.               | 2hu        |  | 1                        | her, E         | 3rian .             | l                          |                           |             |           |  | Came     | er Trac | King N      | vo(s):    |                    |              | 4                     | COC No:<br>180-30380-1176                          | 3.1                      |              |
| Client Contact   | Phone: (71/)           | 866-3      | <b>(</b> %)                                      | E-Ma                     |                | har@i               | ootom.                     | orionin                   | 0 00m       | •         |  |          |         |             |           |                    |              |                       | Page:<br>Page 1 of 1                               |                          |              |
| Thomas Palmer  | CHO                    | ) 066-5    | <del>5                                    </del> | рпа                      | n.nsci         | ner@i               | estam                      | encam                     | C.CON       | 1         |  | <u> </u> |         |             |           |                    |              |                       | lob#:  |                          |              |
| Company: Groundwater & Environmental Services Inc                        |                        |            |  |                          | 1              |                     |                            |                           | Ana         | llysis    | Red  | ues      | ted     |             |           |                    |              | ľ                     |  |                          |              |
| Address:   | Due Date Request       | ed:        |  |                          | 1 1 9          |                     | $\top$                     |                           |             | Ť         | 1  | П        |         | $\neg \tau$ |           |                    | 1,60%        | P                     | reservation Co                                     | des:                     |              |
| 495 Aero Drive Suite 3   |                        |            |  |                          | kili           |                     |                            | [                         | 200         |           | •  |          |         |             | - 1       |                    | 5452         |                       | A - HCL  | M - Hexane               | )            |
| City:  | TAT Requested (da      | ays):      |  |                          | 14             |                     |                            |                           | 2           |           |  |          |         |             | -         |                    |              | E                     | B - NaOH   | N - None                 |              |
| Cheektowaga  | 12.1                   |            |  |                          | ŀL             |                     |                            | 1 [                       | - 1         |           |  | 1 1      |         |             | 1         |                    | 83           |                       | C - Zn Acetate<br>D - Nitric Acid                  | O - AsNaO2<br>P - Na2O49 |              |
| State, Zip:<br>NY, 14225   | 10-de                  |            |  |                          | 1 2            |                     |                            |                           | \$          |           | 1  |          |         | - 1         | - 1       |                    | - 3          | `3 A E                | E - NaHSO4   | Q - Na2SO3               | 3            |
| N1, 14225<br>Phone:  | PO#.                   |            |  |                          | ┨ ┣            | 3                   |                            |                           | اد          |           |  |          |         | ļ           | 1         |                    | 2 %<br>207   |                       | F - MeOH<br>G - Amchlor                            | R - Na2S2S<br>S - H2SO4  |              |
| rione.   | Purchase Order         | not requir |  |                          | la.            |                     |                            | -                         | 2           |           |  |          |         | - 1         | - 1       |                    | - 17         |                       | H - Ascorbic Acid                                  | T - TSP Do               |              |
| Email:   | WO #:                  |            |  |                          | Ž              | _ _                 | .                          |                           | _           |           |  |          |         | - 1         |           |                    | .ph.         |                       | I - Ice  | U - Acetone<br>V - MCAA  | <del>}</del> |
| tpalmer@gesonline.com  |                        |            |  |                          | - g            | or No)              |                            | k                         | <u> </u>    |           |  |          |         | 1           | 1         |                    | 3            | 6                     | J - DI Water<br>K - EDTA                           | W - ph 4-5               |              |
| Project Name:<br>NYSDEC - Gastown WWTP/Gastown Event Desc: Mthly Pre-Car | Project #:<br>48002525 |            |  |                          |                |                     | 200.7 - (MOD) Local Method | 5                         | SCERCS      |           |  |          |         |             |           |                    | itet.        |                       | L - EDA  | Z - other (sp            |              |
| Site:  | SSOW#:                 |            |  |                          | Sample         | <u>کا 3</u>         | ş                          | lag (                     |             |           |  |          |         | - 1         | ]         |                    | 100          | g c                   | Other:   |                          |              |
| New York   |                        |            |  |                          | Sa             |                     | E                          | <u> </u>                  | g           | 1         |  |          |         | ļ           |           |                    | ंद           |                       |  |                          | _            |
|  |                        |            | Sample   | Matrix                   | 8              | Perform MS/MSD (Yes | 급                          | 310.2 - Alkalinity, Total | SOLIE (MOD) |           |  |          |         |             |           |                    | Total Number | ê                     |  |                          |              |
|  |                        |            | Sample<br>Type                                   | (W=water,                | 2              | ءِ اعَ              | 8                          | ₹ k                       | 20          |           | 1  |          |         |             | ı         |                    | Ę            | 31                    |  |                          |              |
|  |                        | Sample     | (C=comp,   | S=solid,<br>O=waste/oil, | 필              | <b>₽</b> 2          | )   <del>[</del>           | 2                         | 3           |           |  |          |         | ŀ           |           |                    | 3            | Ē                     |  |                          |              |
| Sample Identification  | Sample Date            | Time       | G=grab)  |                          | ) <b>E</b>     | 2 8                 | 50                         | 운 (                       | <b>∞</b>    |           |  |          |         |             |           |                    | ţ            | 2                     | Special I  | nstructions/             | /Note:       |
|  |                        | $\searrow$ | Preserva   | ion Code:                | M              | XN                  | D                          | N                         | 1000        | 989       | 1  | 235      |         |             | الإلياء   | . 491              |              | XI.                   | go sale  |                          | 14.1415.1616 |
| Pre-Carbon   | 12-19-13               | •=0=-      | Gab  | Water                    | П              | ×                   | 1                          | × -                       | F           |           |  |          |         |             |           |                    | 100          | <b>***</b>            |  |                          |              |
|  | 101113                 | 1025       |  |                          | ++             | +                   | +                          | -                         | -           | -         |  |          |         | $\dashv$    | $\dashv$  | +                  |              | 200                   |  |                          |              |
| Outsile Sump   | سنہ                    | 1030       | 1  |                          | Ш              |                     |                            |                           | ×           |           | <u> </u>                                       |          |         |             |           |                    | 197          | 4                     |  |                          |              |
|  |                        |            |  |                          | 11             |                     |                            |                           |             |           |  |          |         |             |           |                    |              |                       |  |                          |              |
|  |                        |            |  |                          | +              | 十                   | +                          |                           | -+          |           | $\vdash$                                       | $\vdash$ |         |             | _         | -                  | +            | 1                     |  |                          |              |
|  | <u> </u>               |            |  |                          | Ш              |                     |                            |                           |             |           |  |          |         |             |           |                    |              | _                     |  |                          |              |
|  |                        |            |  |                          | 11             |                     |                            |                           |             |           |  | '        | 1 1     |             |           | 18111 <b>48</b> 11 | 191111       | H                     | . 11111   11111   11111   11111                    | fi .                     |              |
|  |                        |            |  |                          | +              | -                   | 1-                         |                           | $\dashv$    |           | 1  | t        | - 111   |             |           |                    | 11111        | AM)                   |  | 1                        |              |
|  |                        |            |  |                          | Ш              |                     |                            |                           |             |           | ļ  | Ļ        | - 11    |             |           | HHH                | HIII         | ANN                   |  | .M -                     |              |
|  |                        |            |  |                          |                |                     |                            |                           |             |           |  | 1        | - 11    |             | WIII      |                    | MIN          | Ш                     |  | M                        |              |
|  |                        |            |  |                          | +              | +                   | _                          |                           | -           |           |  | $\vdash$ | - 11    | mm:         |           |                    | 4000         |                       | i otoda<br>I III i III i III i III i III i III i I |                          |              |
|  |                        |            |  |                          | Ш              | $\perp$             |                            |                           | _ _         |           | 1  | L        | 4       | 80-5        | 2298      | Cha                | n oi         | Gu                    | ıstody   | _                        |              |
|  |                        |            |  |                          | 11             | ļ                   |                            |                           |             |           |  |          |         | _           | . т       | 'n                 | т            | 77                    | ~-   |                          |              |
|  | -                      |            |  |                          | +              |                     | +                          |                           | +           | +-        | 1  |          |         |             |           |                    | 100          |                       |  |                          |              |
|  |                        |            |  |                          | Ш              |                     |                            |                           |             |           |  |          |         |             |           |                    | 1984<br>11-4 | 79,02<br>79,00        |  |                          |              |
|  |                        |            |  |                          | 11             |                     |                            | 1 1                       |             |           |  |          |         |             |           |                    | *            | Ĉ.                    |  |                          |              |
| Possible Hazard Identification   |                        | 1          |  |                          | <del>-  </del> | Samn                | le Dis                     | posal                     | A fe        | e mav     | be as  | sess     | ed if   | sam         | ples :    | are re             | taine        | ed I                  | onger than 1 n                                     | nonth)                   |              |
|  | B Unknow               |            | fiological                                       |                          | ľ              |                     | Return                     |                           |             |           |  |          | al By   |             |           |                    | Archi        |                       |  | Months                   |              |
|  | Unknow                 | n Rac      | iiologicai                                       |                          |                |                     |                            |                           |             | Require   |  | _        | aı ızy  | Lau         |           |                    | -11 CHIII    | VCI                   | - O/   | _ wonus                  |              |
| Deliverable Requested: I, II, III, IV, Other (specify)                   |                        |            |  |                          | · [            | Opeci               | טפווו וג                   | ucuork                    | 7QC 1       | require   | men  | ω.       |         |             |           |                    |              |                       |  |                          |              |
| Empty Kit Relinationed by:   |                        | Date:      |  |                          | Tim            |                     | Λ                          | 1                         |             | ,         | 1  |          | Metho   | od of S     | Shipme    | ent                |              |                       |  |                          |              |
| Relinquished by: Man JW  | Date/Time: 12-19-13 /  | 1420       |  | Company                  |                | Re                  | ceived                     | by.                       | - /         | 1/4       | 1.   |          |         |             | Date/I    | ime:               | eli          | 2                     | 1420   | Company                  | 345546       |
|  | Date/Time:             | , , , ,    |  | Company                  |                | P                   | of 51<br>geivled           | A/A                       |             | 7 1/4/    | v <u>; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;</u> | 4        |         |             | Date/I    |                    | - 1          | $\stackrel{\smile}{}$ | · rou  | Company                  | JUNTY        |
| Relinquished by:   | Dater Hille.           |            |  | Compaily                 |                |                     |                            | 7                         | X /         | ,         |  |          |         |             | J 4.001 1 |                    |              |                       |  |                          |              |
| Relinguished by:   | Date/Time:             |            |  | Company                  |                | Re                  | cerved                     | by:                       |             |           |  |          |         | _           | Date/1    | ime:               |              |                       |  | Company                  |              |
|  |                        |            |  |                          |                | _L                  |                            | $\stackrel{\smile}{-}$    |             |           |  |          |         |             |           |                    |              |                       |  |                          |              |
| Custody Seals Intact: Custody Seal No.:                                  |                        |            |  |                          |                | Co                  | oler Ter                   | nperatu                   | re(s) °(    | C and Ott | her Re   | marks    | τ.      |             | +         | (                  | -            | 3                     | >.4  |                          |              |

Client: New York State D.E.C. Job Number: 480-52297-1

Login Number: 52297 List Source: TestAmerica Buffalo

List Number: 1 Creator: Kolb, Chris M

| Question   | Answer | Comment |
|--|--------|---------|
| Radioactivity either was not measured or, if measured, is at or below background | True   |         |
| The cooler's custody seal, if present, is intact.                                | True   |         |
| The cooler or samples do not appear to have been compromised or tampered with.   | True   |         |
| Samples were received on ice.  | True   |         |
| Cooler Temperature is acceptable.  | True   |         |
| Cooler Temperature is recorded.  | True   |         |
| COC is present.  | True   |         |
| COC is filled out in ink and legible.  | True   |         |
| COC is filled out with all pertinent information.                                | True   |         |
| Is the Field Sampler's name present on COC?                                      | True   |         |
| There are no discrepancies between the sample IDs on the containers and the COC. | True   |         |
| Samples are received within Holding Time.  | True   |         |
| Sample containers have legible labels.   | True   |         |
| Containers are not broken or leaking.  | True   |         |
| Sample collection date/times are provided.                                       | True   |         |
| Appropriate sample containers are used.  | True   |         |
| Sample bottles are completely filled.  | True   |         |
| Sample Preservation Verified   | True   |         |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True   |         |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.     | True   |         |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True   |         |
| Multiphasic samples are not present.   | True   |         |
| Samples do not require splitting or compositing.                                 | True   |         |
| Sampling Company provided.   | True   | GES     |
| Samples received within 48 hours of sampling.                                    | True   |         |
| Samples requiring field filtration have been filtered in the field.              | True   |         |
| Chlorine Residual checked.   | N/A    |         |
|  |        |         |

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Client: New York State D.E.C. Job Number: 480-52297-1

List Source: TestAmerica Buffalo

Login Number: 52298 List Number: 1 Creator: Kolb, Chris M

the COC.

MS/MSDs

diameter.

needs

There are no discrepancies between the sample IDs on the containers and

There is sufficient vol. for all requested analyses, incl. any requested

VOA sample vials do not have headspace or bubble is <6mm (1/4") in

If necessary, staff have been informed of any short hold time or quick TAT

Samples are received within Holding Time. Sample containers have legible labels.

Sample collection date/times are provided.

Appropriate sample containers are used.

Containers are not broken or leaking.

Sample bottles are completely filled.

Multiphasic samples are not present.

Sampling Company provided.

Chlorine Residual checked.

Samples do not require splitting or compositing.

Samples received within 48 hours of sampling.

Samples requiring field filtration have been filtered in the field.

Sample Preservation Verified

Question Answer Comment Radioactivity either was not measured or, if measured, is at or below True background The cooler's custody seal, if present, is intact. True The cooler or samples do not appear to have been compromised or True tampered with. Samples were received on ice. True Cooler Temperature is acceptable. True Cooler Temperature is recorded. True COC is present. True COC is filled out in ink and legible. True COC is filled out with all pertinent information. True Is the Field Sampler's name present on COC? True

True

True

True

True

True

True

True

True

True

True

True

True

True True

True

True

N/A

**GES** 

4 -

TestAmerica Buffalo